

## ANALYTICAL REPORT

Job Number: 440-258875-1

Job Description: ACMS - BP Yerington OU-4b\_OU-5 Soil

For:

Wood E&I Solutions Inc  
10940 White Rock Road Suite 190  
Rancho Cordova, CA 95670

Attention: Lynda Lombardi



Approved for release.  
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Project Manager I  
1/24/2020 5:36 PM

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01/24/2020

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Job Number: 440-258875-1  
Job Description: ACMS - BP Yerington OU-4b\_OU-5 Soil

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the BPLAMP Technical Specifications, applicable federal, state, local regulations and certification requirements as well as the methodologies as described in laboratory SOPs reviewed by the BPLAMP. This Laboratory Report is confidential and is intended for the sole use of Eurofins TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. The signature on the cover page extends to the case narrative and all the data and forms in the package. The Chain of Custody is included and is an integral part of this report.



Approved for release.  
Christian M Bondoc  
Project Manager I  
1/24/2020 5:36 PM

Christian M Bondoc

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# Definitions/Glossary

Client: Wood E&I Solutions Inc

Project/Site: ACMS - BP Yerington OU-4b\_OU-5 Soil

Job ID: 440-258875-1

## Qualifiers

### Metals

#### Qualifier

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

**Job Narrative  
440-258875-1**

**Comments**

No additional comments.

**Receipt**

The samples were received on 1/10/2020 10:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.4° C.

**Metals**

Method 6010B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries of Aluminum and Iron for preparation batch 440-590204 and analytical batch 440-590318 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected. The associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 6010B: The post digestion spike % recovery for Aluminum and Iron associated with batch 440-590318 was outside of control limits.

Method 6010B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries of Magnesium, Aluminum and Iron for preparation batch 440-590204 and analytical batch 440-590424 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected. The associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 6020: The matrix spike / matrix spike duplicate (MS/MSD) recoveries of Copper and Antimony for preparation batch 440-590297 and analytical batch 440-590542 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected. The associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 6020: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision of Barium for preparation batch 440-590297 and analytical batch 440-590542 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected. The associated laboratory control sample (LCS) was within acceptance limits.

Method 6010B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision of Strontium for preparation batch 440-590297 and analytical batch 440-590755 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected. The associated laboratory control sample (LCS) was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

**General Chemistry**

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

**Organic Prep**

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Detection Summary

Client: Wood E&I Solutions Inc

Project/Site: ACMS - BP Yerington OU-4b\_OU-5 Soil

Job ID: 440-258875-1

**Client Sample ID: WRSB208\_0-0.5**

**Lab Sample ID: 440-258875-1**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	7500		11	8.1	mg/Kg	5	*	6010B	Total/NA
Boron	4.4	J	5.3	2.6	mg/Kg	5	*	6010B	Total/NA
Calcium	7000		26	14	mg/Kg	5	*	6010B	Total/NA
Iron	14000		11	7.3	mg/Kg	5	*	6010B	Total/NA
Lithium	7.5		5.3	3.0	mg/Kg	5	*	6010B	Total/NA
Magnesium	3300		11	5.3	mg/Kg	5	*	6010B	Total/NA
Phosphorus	440		5.3	2.6	mg/Kg	5	*	6010B	Total/NA
Potassium	1200		66	34	mg/Kg	5	*	6010B	Total/NA
Sodium	320		66	34	mg/Kg	5	*	6010B	Total/NA
Strontium	69	F2 F1	5.3	2.6	mg/Kg	5	*	6010B	Total/NA
Titanium	340		2.1	1.1	mg/Kg	5	*	6010B	Total/NA
Antimony	0.54	J F1	1.1	0.28	mg/Kg	20	*	6020	Total/NA
Arsenic	5.4		0.53	0.26	mg/Kg	20	*	6020	Total/NA
Barium	86	F1 F2	0.53	0.26	mg/Kg	20	*	6020	Total/NA
Beryllium	0.47		0.32	0.16	mg/Kg	20	*	6020	Total/NA
Chromium	6.4		1.1	0.53	mg/Kg	20	*	6020	Total/NA
Cobalt	5.0		0.53	0.22	mg/Kg	20	*	6020	Total/NA
Copper	67	F1	1.1	0.53	mg/Kg	20	*	6020	Total/NA
Lead	5.0		0.53	0.26	mg/Kg	20	*	6020	Total/NA
Manganese	220		0.53	0.26	mg/Kg	20	*	6020	Total/NA
Molybdenum	0.63	J	1.1	0.53	mg/Kg	20	*	6020	Total/NA
Nickel	5.4		1.1	0.53	mg/Kg	20	*	6020	Total/NA
Selenium	1.1		1.1	0.21	mg/Kg	20	*	6020	Total/NA
Vanadium	32		1.1	0.53	mg/Kg	20	*	6020	Total/NA
Zinc	22		11	5.3	mg/Kg	20	*	6020	Total/NA
Mercury	0.062		0.021	0.012	mg/Kg	1	*	7471A	Total/NA
Sample Homogenized	yes				NONE	1		Homogenization	Total/NA

**Client Sample ID: WRSB208\_0.5-3**

**Lab Sample ID: 440-258875-2**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	7900		11	8.1	mg/Kg	5	*	6010B	Total/NA
Boron	4.7	J	5.3	2.6	mg/Kg	5	*	6010B	Total/NA
Calcium	6200		26	14	mg/Kg	5	*	6010B	Total/NA
Iron	14000		11	7.3	mg/Kg	5	*	6010B	Total/NA
Lithium	8.2		5.3	2.9	mg/Kg	5	*	6010B	Total/NA
Magnesium	3300		11	5.3	mg/Kg	5	*	6010B	Total/NA
Phosphorus	470		5.3	2.6	mg/Kg	5	*	6010B	Total/NA
Potassium	1200		66	34	mg/Kg	5	*	6010B	Total/NA
Sodium	510		66	34	mg/Kg	5	*	6010B	Total/NA
Strontium	60		5.3	2.6	mg/Kg	5	*	6010B	Total/NA
Titanium	380		2.1	1.1	mg/Kg	5	*	6010B	Total/NA
Antimony	0.35	J	1.1	0.28	mg/Kg	20	*	6020	Total/NA
Arsenic	5.0		0.53	0.26	mg/Kg	20	*	6020	Total/NA
Barium	75		0.53	0.26	mg/Kg	20	*	6020	Total/NA
Beryllium	0.41		0.32	0.16	mg/Kg	20	*	6020	Total/NA
Chromium	7.7		1.1	0.53	mg/Kg	20	*	6020	Total/NA
Cobalt	4.5		0.53	0.22	mg/Kg	20	*	6020	Total/NA
Copper	66		1.1	0.53	mg/Kg	20	*	6020	Total/NA
Lead	4.0		0.53	0.26	mg/Kg	20	*	6020	Total/NA
Manganese	230		0.53	0.26	mg/Kg	20	*	6020	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Calscience Irvine

# Detection Summary

Client: Wood E&I Solutions Inc

Project/Site: ACMS - BP Yerington OU-4b\_OU-5 Soil

Job ID: 440-258875-1

## Client Sample ID: WRSB208\_0.5-3 (Continued)

## Lab Sample ID: 440-258875-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Molybdenum	0.58	J	1.1	0.53	mg/Kg	20	*	6020	Total/NA
Nickel	5.4		1.1	0.53	mg/Kg	20	*	6020	Total/NA
Selenium	1.2		1.1	0.21	mg/Kg	20	*	6020	Total/NA
Vanadium	34		1.1	0.53	mg/Kg	20	*	6020	Total/NA
Zinc	25		11	5.3	mg/Kg	20	*	6020	Total/NA
Sample Homogenized	yes				NONE	1		Homogenization	Total/NA

## Client Sample ID: WRSB208\_3-6

## Lab Sample ID: 440-258875-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	7700		10	8.1	mg/Kg	5	*	6010B	Total/NA
Boron	4.8	J	5.2	2.6	mg/Kg	5	*	6010B	Total/NA
Calcium	6200		26	14	mg/Kg	5	*	6010B	Total/NA
Iron	14000		10	7.2	mg/Kg	5	*	6010B	Total/NA
Lithium	7.5		5.2	2.9	mg/Kg	5	*	6010B	Total/NA
Magnesium	3300		10	5.2	mg/Kg	5	*	6010B	Total/NA
Phosphorus	540		5.2	2.6	mg/Kg	5	*	6010B	Total/NA
Potassium	1200		66	34	mg/Kg	5	*	6010B	Total/NA
Sodium	560		66	34	mg/Kg	5	*	6010B	Total/NA
Strontium	61		5.2	2.6	mg/Kg	5	*	6010B	Total/NA
Titanium	350		2.1	1.0	mg/Kg	5	*	6010B	Total/NA
Antimony	0.32	J	1.0	0.28	mg/Kg	20	*	6020	Total/NA
Arsenic	4.9		0.52	0.26	mg/Kg	20	*	6020	Total/NA
Barium	94		0.52	0.26	mg/Kg	20	*	6020	Total/NA
Beryllium	0.37		0.31	0.16	mg/Kg	20	*	6020	Total/NA
Chromium	7.1		1.0	0.52	mg/Kg	20	*	6020	Total/NA
Cobalt	4.7		0.52	0.22	mg/Kg	20	*	6020	Total/NA
Copper	66		1.0	0.52	mg/Kg	20	*	6020	Total/NA
Lead	4.0		0.52	0.26	mg/Kg	20	*	6020	Total/NA
Manganese	270		0.52	0.26	mg/Kg	20	*	6020	Total/NA
Molybdenum	0.64	J	1.0	0.52	mg/Kg	20	*	6020	Total/NA
Nickel	5.6		1.0	0.52	mg/Kg	20	*	6020	Total/NA
Selenium	1.3		1.0	0.21	mg/Kg	20	*	6020	Total/NA
Vanadium	33		1.0	0.52	mg/Kg	20	*	6020	Total/NA
Zinc	24		10	5.2	mg/Kg	20	*	6020	Total/NA
Sample Homogenized	yes				NONE	1		Homogenization	Total/NA

## Client Sample ID: WRSB208\_6-15

## Lab Sample ID: 440-258875-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	7900		10	8.1	mg/Kg	5	*	6010B	Total/NA
Boron	4.8	J	5.2	2.6	mg/Kg	5	*	6010B	Total/NA
Calcium	6300		26	14	mg/Kg	5	*	6010B	Total/NA
Iron	13000		10	7.2	mg/Kg	5	*	6010B	Total/NA
Lithium	7.4		5.2	2.9	mg/Kg	5	*	6010B	Total/NA
Magnesium	3300		10	5.2	mg/Kg	5	*	6010B	Total/NA
Phosphorus	510		5.2	2.6	mg/Kg	5	*	6010B	Total/NA
Potassium	1200		66	34	mg/Kg	5	*	6010B	Total/NA
Sodium	540		66	34	mg/Kg	5	*	6010B	Total/NA
Strontium	64		5.2	2.6	mg/Kg	5	*	6010B	Total/NA
Titanium	320		2.1	1.0	mg/Kg	5	*	6010B	Total/NA
Antimony	0.30	J	1.0	0.28	mg/Kg	20	*	6020	Total/NA

This Detection Summary does not include radiochemical test results.

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# Detection Summary

Client: Wood E&I Solutions Inc

Project/Site: ACMS - BP Yerington OU-4b\_OU-5 Soil

Job ID: 440-258875-1

## Client Sample ID: WRSB208\_6-15 (Continued)

## Lab Sample ID: 440-258875-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	5.1		0.52	0.26	mg/Kg	20	⊗	6020	Total/NA
Barium	81		0.52	0.26	mg/Kg	20	⊗	6020	Total/NA
Beryllium	0.43		0.31	0.16	mg/Kg	20	⊗	6020	Total/NA
Chromium	7.8		1.0	0.52	mg/Kg	20	⊗	6020	Total/NA
Cobalt	4.5		0.52	0.22	mg/Kg	20	⊗	6020	Total/NA
Copper	63		1.0	0.52	mg/Kg	20	⊗	6020	Total/NA
Lead	3.7		0.52	0.26	mg/Kg	20	⊗	6020	Total/NA
Manganese	210		0.52	0.26	mg/Kg	20	⊗	6020	Total/NA
Molybdenum	0.53 J		1.0	0.52	mg/Kg	20	⊗	6020	Total/NA
Nickel	5.5		1.0	0.52	mg/Kg	20	⊗	6020	Total/NA
Selenium	1.5		1.0	0.21	mg/Kg	20	⊗	6020	Total/NA
Vanadium	32		1.0	0.52	mg/Kg	20	⊗	6020	Total/NA
Zinc	24		10	5.2	mg/Kg	20	⊗	6020	Total/NA
Sample Homogenized	yes				NONE	1		Homogenization	Total/NA

## Client Sample ID: WRSB208\_15-25

## Lab Sample ID: 440-258875-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	8300		10	8.0	mg/Kg	5	⊗	6010B	Total/NA
Boron	5.4		5.2	2.6	mg/Kg	5	⊗	6010B	Total/NA
Calcium	6600		26	14	mg/Kg	5	⊗	6010B	Total/NA
Iron	16000		10	7.2	mg/Kg	5	⊗	6010B	Total/NA
Lithium	8.7		5.2	2.9	mg/Kg	5	⊗	6010B	Total/NA
Magnesium	3500		10	5.2	mg/Kg	5	⊗	6010B	Total/NA
Phosphorus	500		5.2	2.6	mg/Kg	5	⊗	6010B	Total/NA
Potassium	1300		65	34	mg/Kg	5	⊗	6010B	Total/NA
Sodium	530		65	33	mg/Kg	5	⊗	6010B	Total/NA
Strontium	59		5.2	2.6	mg/Kg	5	⊗	6010B	Total/NA
Titanium	380		2.1	1.0	mg/Kg	5	⊗	6010B	Total/NA
Antimony	0.43 J		1.0	0.28	mg/Kg	20	⊗	6020	Total/NA
Arsenic	6.3		0.52	0.26	mg/Kg	20	⊗	6020	Total/NA
Barium	91		0.52	0.26	mg/Kg	20	⊗	6020	Total/NA
Beryllium	0.41		0.31	0.16	mg/Kg	20	⊗	6020	Total/NA
Chromium	8.7		1.0	0.52	mg/Kg	20	⊗	6020	Total/NA
Cobalt	4.6		0.52	0.22	mg/Kg	20	⊗	6020	Total/NA
Copper	110		1.0	0.52	mg/Kg	20	⊗	6020	Total/NA
Lead	8.3		0.52	0.26	mg/Kg	20	⊗	6020	Total/NA
Manganese	270		0.52	0.26	mg/Kg	20	⊗	6020	Total/NA
Molybdenum	1.5		1.0	0.52	mg/Kg	20	⊗	6020	Total/NA
Nickel	5.8		1.0	0.52	mg/Kg	20	⊗	6020	Total/NA
Selenium	1.6		1.0	0.21	mg/Kg	20	⊗	6020	Total/NA
Vanadium	36		1.0	0.52	mg/Kg	20	⊗	6020	Total/NA
Zinc	25		10	5.2	mg/Kg	20	⊗	6020	Total/NA
Sample Homogenized	yes				NONE	1		Homogenization	Total/NA

## Client Sample ID: WRSB208-FD\_15-25

## Lab Sample ID: 440-258875-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	8100		10	7.9	mg/Kg	5	⊗	6010B	Total/NA
Boron	4.9 J		5.1	2.6	mg/Kg	5	⊗	6010B	Total/NA
Calcium	6900		26	14	mg/Kg	5	⊗	6010B	Total/NA
Iron	15000		10	7.0	mg/Kg	5	⊗	6010B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Calscience Irvine

# Detection Summary

Client: Wood E&I Solutions Inc

Project/Site: ACMS - BP Yerington OU-4b\_OU-5 Soil

Job ID: 440-258875-1

## Client Sample ID: WRSB208-FD\_15-25 (Continued)

## Lab Sample ID: 440-258875-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	7.9		5.1	2.9	mg/Kg	5	*	6010B	Total/NA
Magnesium	3500		10	5.1	mg/Kg	5	*	6010B	Total/NA
Phosphorus	500		5.1	2.6	mg/Kg	5	*	6010B	Total/NA
Potassium	1300		64	33	mg/Kg	5	*	6010B	Total/NA
Sodium	520		64	33	mg/Kg	5	*	6010B	Total/NA
Strontium	61		5.1	2.6	mg/Kg	5	*	6010B	Total/NA
Titanium	330		2.0	1.0	mg/Kg	5	*	6010B	Total/NA
Antimony	0.37 J		1.0	0.28	mg/Kg	20	*	6020	Total/NA
Arsenic	5.7		0.51	0.26	mg/Kg	20	*	6020	Total/NA
Barium	85		0.51	0.26	mg/Kg	20	*	6020	Total/NA
Beryllium	0.42		0.31	0.15	mg/Kg	20	*	6020	Total/NA
Chromium	7.9		1.0	0.51	mg/Kg	20	*	6020	Total/NA
Cobalt	5.0		0.51	0.21	mg/Kg	20	*	6020	Total/NA
Copper	110		1.0	0.51	mg/Kg	20	*	6020	Total/NA
Lead	7.3		0.51	0.26	mg/Kg	20	*	6020	Total/NA
Manganese	280		0.51	0.26	mg/Kg	20	*	6020	Total/NA
Molybdenum	1.3		1.0	0.51	mg/Kg	20	*	6020	Total/NA
Nickel	5.9		1.0	0.51	mg/Kg	20	*	6020	Total/NA
Selenium	1.4		1.0	0.20	mg/Kg	20	*	6020	Total/NA
Vanadium	34		1.0	0.51	mg/Kg	20	*	6020	Total/NA
Zinc	23		10	5.1	mg/Kg	20	*	6020	Total/NA
Sample Homogenized	yes				NONE	1		Homogenization	Total/NA

## Client Sample ID: WRSB208\_25-35

## Lab Sample ID: 440-258875-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	8600		11	8.1	mg/Kg	5	*	6010B	Total/NA
Boron	5.7		5.3	2.6	mg/Kg	5	*	6010B	Total/NA
Calcium	9600		26	14	mg/Kg	5	*	6010B	Total/NA
Iron	15000		11	7.3	mg/Kg	5	*	6010B	Total/NA
Lithium	7.8		5.3	2.9	mg/Kg	5	*	6010B	Total/NA
Magnesium	3300		11	5.3	mg/Kg	5	*	6010B	Total/NA
Phosphorus	510		5.3	2.6	mg/Kg	5	*	6010B	Total/NA
Potassium	1500		66	34	mg/Kg	5	*	6010B	Total/NA
Sodium	570		66	34	mg/Kg	5	*	6010B	Total/NA
Strontium	62		5.3	2.6	mg/Kg	5	*	6010B	Total/NA
Titanium	390		2.1	1.1	mg/Kg	5	*	6010B	Total/NA
Antimony	0.37 J		1.1	0.28	mg/Kg	20	*	6020	Total/NA
Arsenic	6.0		0.53	0.26	mg/Kg	20	*	6020	Total/NA
Barium	94		0.53	0.26	mg/Kg	20	*	6020	Total/NA
Beryllium	0.35		0.32	0.16	mg/Kg	20	*	6020	Total/NA
Chromium	10		1.1	0.53	mg/Kg	20	*	6020	Total/NA
Cobalt	4.7		0.53	0.22	mg/Kg	20	*	6020	Total/NA
Copper	130		1.1	0.53	mg/Kg	20	*	6020	Total/NA
Lead	5.6		0.53	0.26	mg/Kg	20	*	6020	Total/NA
Manganese	270		0.53	0.26	mg/Kg	20	*	6020	Total/NA
Molybdenum	1.7		1.1	0.53	mg/Kg	20	*	6020	Total/NA
Nickel	5.9		1.1	0.53	mg/Kg	20	*	6020	Total/NA
Selenium	1.3		1.1	0.21	mg/Kg	20	*	6020	Total/NA
Vanadium	34		1.1	0.53	mg/Kg	20	*	6020	Total/NA
Zinc	26		11	5.3	mg/Kg	20	*	6020	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Calscience Irvine

# Detection Summary

Client: Wood E&I Solutions Inc

Project/Site: ACMS - BP Yerington OU-4b\_OU-5 Soil

Job ID: 440-258875-1

## Client Sample ID: WRSB208\_25-35 (Continued)

## Lab Sample ID: 440-258875-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	0.026		0.021	0.013	mg/Kg	1	⊗	7471A	Total/NA
Sample Homogenized	yes			NONE		1		Homogenization	Total/NA

## Client Sample ID: WRSB208\_35-45

## Lab Sample ID: 440-258875-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	8900		10	8.0	mg/Kg	5	⊗	6010B	Total/NA
Boron	4.7 J		5.2	2.6	mg/Kg	5	⊗	6010B	Total/NA
Calcium	6200		26	14	mg/Kg	5	⊗	6010B	Total/NA
Iron	15000		10	7.2	mg/Kg	5	⊗	6010B	Total/NA
Lithium	8.0		5.2	2.9	mg/Kg	5	⊗	6010B	Total/NA
Magnesium	3600		10	5.2	mg/Kg	5	⊗	6010B	Total/NA
Phosphorus	540		5.2	2.6	mg/Kg	5	⊗	6010B	Total/NA
Potassium	1400		65	34	mg/Kg	5	⊗	6010B	Total/NA
Sodium	630		65	33	mg/Kg	5	⊗	6010B	Total/NA
Strontium	67		5.2	2.6	mg/Kg	5	⊗	6010B	Total/NA
Titanium	370		2.1	1.0	mg/Kg	5	⊗	6010B	Total/NA
Antimony	0.39 J		1.0	0.28	mg/Kg	20	⊗	6020	Total/NA
Arsenic	5.0		0.52	0.26	mg/Kg	20	⊗	6020	Total/NA
Barium	100		0.52	0.26	mg/Kg	20	⊗	6020	Total/NA
Beryllium	0.43		0.31	0.16	mg/Kg	20	⊗	6020	Total/NA
Chromium	11		1.0	0.52	mg/Kg	20	⊗	6020	Total/NA
Cobalt	4.5		0.52	0.22	mg/Kg	20	⊗	6020	Total/NA
Copper	68		1.0	0.52	mg/Kg	20	⊗	6020	Total/NA
Lead	6.3		0.52	0.26	mg/Kg	20	⊗	6020	Total/NA
Manganese	320		0.52	0.26	mg/Kg	20	⊗	6020	Total/NA
Molybdenum	1.5		1.0	0.52	mg/Kg	20	⊗	6020	Total/NA
Nickel	6.1		1.0	0.52	mg/Kg	20	⊗	6020	Total/NA
Selenium	1.5		1.0	0.21	mg/Kg	20	⊗	6020	Total/NA
Vanadium	33		1.0	0.52	mg/Kg	20	⊗	6020	Total/NA
Zinc	27		10	5.2	mg/Kg	20	⊗	6020	Total/NA
Sample Homogenized	yes			NONE		1		Homogenization	Total/NA

## Client Sample ID: WRSB208\_45-55

## Lab Sample ID: 440-258875-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	9000		11	8.2	mg/Kg	5	⊗	6010B	Total/NA
Boron	4.6 J		5.3	2.7	mg/Kg	5	⊗	6010B	Total/NA
Calcium	6700		27	14	mg/Kg	5	⊗	6010B	Total/NA
Iron	14000		11	7.4	mg/Kg	5	⊗	6010B	Total/NA
Lithium	8.0		5.3	3.0	mg/Kg	5	⊗	6010B	Total/NA
Magnesium	3300		11	5.3	mg/Kg	5	⊗	6010B	Total/NA
Phosphorus	420		5.3	2.7	mg/Kg	5	⊗	6010B	Total/NA
Potassium	1500		67	35	mg/Kg	5	⊗	6010B	Total/NA
Sodium	610		67	34	mg/Kg	5	⊗	6010B	Total/NA
Strontium	74		5.3	2.7	mg/Kg	5	⊗	6010B	Total/NA
Titanium	320		2.1	1.1	mg/Kg	5	⊗	6010B	Total/NA
Antimony	0.33 J		1.1	0.29	mg/Kg	20	⊗	6020	Total/NA
Arsenic	4.7		0.53	0.27	mg/Kg	20	⊗	6020	Total/NA
Barium	110		0.53	0.27	mg/Kg	20	⊗	6020	Total/NA
Beryllium	0.54		0.32	0.16	mg/Kg	20	⊗	6020	Total/NA
Chromium	9.1		1.1	0.53	mg/Kg	20	⊗	6020	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Calscience Irvine

# Detection Summary

Client: Wood E&I Solutions Inc

Project/Site: ACMS - BP Yerington OU-4b\_OU-5 Soil

Job ID: 440-258875-1

## Client Sample ID: WRSB208\_45-55 (Continued)

## Lab Sample ID: 440-258875-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cobalt	4.5		0.53	0.22	mg/Kg	20	⊗	6020	Total/NA
Copper	49		1.1	0.53	mg/Kg	20	⊗	6020	Total/NA
Lead	5.4		0.53	0.27	mg/Kg	20	⊗	6020	Total/NA
Manganese	300		0.53	0.27	mg/Kg	20	⊗	6020	Total/NA
Molybdenum	1.2		1.1	0.53	mg/Kg	20	⊗	6020	Total/NA
Nickel	5.3		1.1	0.53	mg/Kg	20	⊗	6020	Total/NA
Selenium	1.6		1.1	0.21	mg/Kg	20	⊗	6020	Total/NA
Vanadium	33		1.1	0.53	mg/Kg	20	⊗	6020	Total/NA
Zinc	28		11	5.3	mg/Kg	20	⊗	6020	Total/NA
Sample Homogenized	yes				NONE	1		Homogenization	Total/NA

## Client Sample ID: WRSB208\_55-65

## Lab Sample ID: 440-258875-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	9200		11	8.2	mg/Kg	5	⊗	6010B	Total/NA
Boron	4.8 J		5.3	2.7	mg/Kg	5	⊗	6010B	Total/NA
Calcium	5500		27	14	mg/Kg	5	⊗	6010B	Total/NA
Iron	16000		11	7.4	mg/Kg	5	⊗	6010B	Total/NA
Lithium	8.0		5.3	3.0	mg/Kg	5	⊗	6010B	Total/NA
Magnesium	3300		11	5.3	mg/Kg	5	⊗	6010B	Total/NA
Phosphorus	430		5.3	2.7	mg/Kg	5	⊗	6010B	Total/NA
Potassium	1500		67	35	mg/Kg	5	⊗	6010B	Total/NA
Sodium	600		67	34	mg/Kg	5	⊗	6010B	Total/NA
Strontium	61		5.3	2.7	mg/Kg	5	⊗	6010B	Total/NA
Titanium	380		2.1	1.1	mg/Kg	5	⊗	6010B	Total/NA
Antimony	0.34 J		1.1	0.29	mg/Kg	20	⊗	6020	Total/NA
Arsenic	4.7		0.53	0.27	mg/Kg	20	⊗	6020	Total/NA
Barium	99		0.53	0.27	mg/Kg	20	⊗	6020	Total/NA
Beryllium	0.48		0.32	0.16	mg/Kg	20	⊗	6020	Total/NA
Chromium	9.8		1.1	0.53	mg/Kg	20	⊗	6020	Total/NA
Cobalt	4.4		0.53	0.22	mg/Kg	20	⊗	6020	Total/NA
Copper	62		1.1	0.53	mg/Kg	20	⊗	6020	Total/NA
Lead	5.3		0.53	0.27	mg/Kg	20	⊗	6020	Total/NA
Manganese	300		0.53	0.27	mg/Kg	20	⊗	6020	Total/NA
Molybdenum	1.6		1.1	0.53	mg/Kg	20	⊗	6020	Total/NA
Nickel	5.7		1.1	0.53	mg/Kg	20	⊗	6020	Total/NA
Selenium	1.9		1.1	0.21	mg/Kg	20	⊗	6020	Total/NA
Vanadium	32		1.1	0.53	mg/Kg	20	⊗	6020	Total/NA
Zinc	28		11	5.3	mg/Kg	20	⊗	6020	Total/NA
Sample Homogenized	yes				NONE	1		Homogenization	Total/NA

## Client Sample ID: WRSB208\_65-75

## Lab Sample ID: 440-258875-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	8900		11	8.2	mg/Kg	5	⊗	6010B	Total/NA
Boron	4.6 J		5.3	2.7	mg/Kg	5	⊗	6010B	Total/NA
Calcium	5100		27	14	mg/Kg	5	⊗	6010B	Total/NA
Iron	15000		11	7.3	mg/Kg	5	⊗	6010B	Total/NA
Lithium	7.7		5.3	3.0	mg/Kg	5	⊗	6010B	Total/NA
Magnesium	3100		11	5.3	mg/Kg	5	⊗	6010B	Total/NA
Phosphorus	440		5.3	2.7	mg/Kg	5	⊗	6010B	Total/NA
Potassium	1500		66	34	mg/Kg	5	⊗	6010B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Calscience Irvine

# Detection Summary

Client: Wood E&I Solutions Inc

Project/Site: ACMS - BP Yerington OU-4b\_OU-5 Soil

Job ID: 440-258875-1

## **Client Sample ID: WRSB208\_65-75 (Continued)**

## **Lab Sample ID: 440-258875-12**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sodium	590		66	34	mg/Kg	5	*	6010B	Total/NA
Strontium	64		5.3	2.7	mg/Kg	5	*	6010B	Total/NA
Titanium	380		2.1	1.1	mg/Kg	5	*	6010B	Total/NA
Antimony	0.32 J		1.1	0.29	mg/Kg	20	*	6020	Total/NA
Arsenic	4.9		0.53	0.27	mg/Kg	20	*	6020	Total/NA
Barium	110		0.53	0.27	mg/Kg	20	*	6020	Total/NA
Beryllium	0.44		0.32	0.16	mg/Kg	20	*	6020	Total/NA
Chromium	11		1.1	0.53	mg/Kg	20	*	6020	Total/NA
Cobalt	4.5		0.53	0.22	mg/Kg	20	*	6020	Total/NA
Copper	45		1.1	0.53	mg/Kg	20	*	6020	Total/NA
Lead	5.3		0.53	0.27	mg/Kg	20	*	6020	Total/NA
Manganese	330		0.53	0.27	mg/Kg	20	*	6020	Total/NA
Molybdenum	1.3		1.1	0.53	mg/Kg	20	*	6020	Total/NA
Nickel	5.3		1.1	0.53	mg/Kg	20	*	6020	Total/NA
Selenium	1.9		1.1	0.21	mg/Kg	20	*	6020	Total/NA
Vanadium	34		1.1	0.53	mg/Kg	20	*	6020	Total/NA
Zinc	29		11	5.3	mg/Kg	20	*	6020	Total/NA
Sample Homogenized	yes				NONE	1		Homogenization	Total/NA

## **Client Sample ID: WRSB208-FD\_65-75**

## **Lab Sample ID: 440-258875-13**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	9200		11	8.1	mg/Kg	5	*	6010B	Total/NA
Boron	4.7 J		5.3	2.6	mg/Kg	5	*	6010B	Total/NA
Calcium	5600		26	14	mg/Kg	5	*	6010B	Total/NA
Iron	16000		11	7.3	mg/Kg	5	*	6010B	Total/NA
Lithium	8.3		5.3	2.9	mg/Kg	5	*	6010B	Total/NA
Magnesium	3100		11	5.3	mg/Kg	5	*	6010B	Total/NA
Phosphorus	420		5.3	2.6	mg/Kg	5	*	6010B	Total/NA
Potassium	1500		66	34	mg/Kg	5	*	6010B	Total/NA
Sodium	600		66	34	mg/Kg	5	*	6010B	Total/NA
Strontium	61		5.3	2.6	mg/Kg	5	*	6010B	Total/NA
Titanium	410		2.1	1.1	mg/Kg	5	*	6010B	Total/NA
Antimony	0.43 J		1.1	0.28	mg/Kg	20	*	6020	Total/NA
Arsenic	6.5		0.53	0.26	mg/Kg	20	*	6020	Total/NA
Barium	97		0.53	0.26	mg/Kg	20	*	6020	Total/NA
Beryllium	0.45		0.32	0.16	mg/Kg	20	*	6020	Total/NA
Chromium	11		1.1	0.53	mg/Kg	20	*	6020	Total/NA
Cobalt	4.2		0.53	0.22	mg/Kg	20	*	6020	Total/NA
Copper	37		1.1	0.53	mg/Kg	20	*	6020	Total/NA
Lead	5.4		0.53	0.26	mg/Kg	20	*	6020	Total/NA
Manganese	300		0.53	0.26	mg/Kg	20	*	6020	Total/NA
Molybdenum	1.3		1.1	0.53	mg/Kg	20	*	6020	Total/NA
Nickel	5.1		1.1	0.53	mg/Kg	20	*	6020	Total/NA
Selenium	1.6		1.1	0.21	mg/Kg	20	*	6020	Total/NA
Vanadium	34		1.1	0.53	mg/Kg	20	*	6020	Total/NA
Zinc	29		11	5.3	mg/Kg	20	*	6020	Total/NA
Sample Homogenized	yes				NONE	1		Homogenization	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Calscience Irvine

# Detection Summary

Client: Wood E&I Solutions Inc

Project/Site: ACMS - BP Yerington OU-4b\_OU-5 Soil

Job ID: 440-258875-1

**Client Sample ID: WRSB208\_75-85**

**Lab Sample ID: 440-258875-14**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	8800		11	8.3	mg/Kg	5	*	6010B	Total/NA
Boron	4.5	J	5.4	2.7	mg/Kg	5	*	6010B	Total/NA
Calcium	4800		27	15	mg/Kg	5	*	6010B	Total/NA
Iron	15000		11	7.5	mg/Kg	5	*	6010B	Total/NA
Lithium	8.2		5.4	3.0	mg/Kg	5	*	6010B	Total/NA
Magnesium	3000		11	5.4	mg/Kg	5	*	6010B	Total/NA
Phosphorus	430		5.4	2.7	mg/Kg	5	*	6010B	Total/NA
Potassium	1500		68	35	mg/Kg	5	*	6010B	Total/NA
Sodium	630		68	35	mg/Kg	5	*	6010B	Total/NA
Strontium	66		5.4	2.7	mg/Kg	5	*	6010B	Total/NA
Titanium	400		2.2	1.1	mg/Kg	5	*	6010B	Total/NA
Antimony	0.39	J	1.1	0.29	mg/Kg	20	*	6020	Total/NA
Arsenic	4.6		0.54	0.27	mg/Kg	20	*	6020	Total/NA
Barium	110		0.54	0.27	mg/Kg	20	*	6020	Total/NA
Beryllium	0.51		0.32	0.16	mg/Kg	20	*	6020	Total/NA
Chromium	9.2		1.1	0.54	mg/Kg	20	*	6020	Total/NA
Cobalt	4.5		0.54	0.23	mg/Kg	20	*	6020	Total/NA
Copper	33		1.1	0.54	mg/Kg	20	*	6020	Total/NA
Lead	5.6		0.54	0.27	mg/Kg	20	*	6020	Total/NA
Manganese	340		0.54	0.27	mg/Kg	20	*	6020	Total/NA
Molybdenum	0.75	J	1.1	0.54	mg/Kg	20	*	6020	Total/NA
Nickel	5.3		1.1	0.54	mg/Kg	20	*	6020	Total/NA
Selenium	1.6		1.1	0.22	mg/Kg	20	*	6020	Total/NA
Vanadium	33		1.1	0.54	mg/Kg	20	*	6020	Total/NA
Zinc	28		11	5.4	mg/Kg	20	*	6020	Total/NA
Sample Homogenized	yes			NONE		1		Homogenization	Total/NA

**Client Sample ID: WRSB208\_85-95**

**Lab Sample ID: 440-258875-15**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	8700		11	8.2	mg/Kg	5	*	6010B	Total/NA
Boron	4.3	J	5.3	2.7	mg/Kg	5	*	6010B	Total/NA
Calcium	5300		27	14	mg/Kg	5	*	6010B	Total/NA
Iron	14000		11	7.4	mg/Kg	5	*	6010B	Total/NA
Lithium	7.7		5.3	3.0	mg/Kg	5	*	6010B	Total/NA
Magnesium	3100		11	5.3	mg/Kg	5	*	6010B	Total/NA
Phosphorus	430		5.3	2.7	mg/Kg	5	*	6010B	Total/NA
Potassium	1500		67	35	mg/Kg	5	*	6010B	Total/NA
Sodium	740		67	34	mg/Kg	5	*	6010B	Total/NA
Strontium	87		5.3	2.7	mg/Kg	5	*	6010B	Total/NA
Titanium	320		2.1	1.1	mg/Kg	5	*	6010B	Total/NA
Antimony	0.39	J	1.1	0.29	mg/Kg	20	*	6020	Total/NA
Arsenic	6.1		0.53	0.27	mg/Kg	20	*	6020	Total/NA
Barium	170		0.53	0.27	mg/Kg	20	*	6020	Total/NA
Beryllium	0.49		0.32	0.16	mg/Kg	20	*	6020	Total/NA
Chromium	8.4		1.1	0.53	mg/Kg	20	*	6020	Total/NA
Cobalt	4.3		0.53	0.22	mg/Kg	20	*	6020	Total/NA
Copper	37		1.1	0.53	mg/Kg	20	*	6020	Total/NA
Lead	5.1		0.53	0.27	mg/Kg	20	*	6020	Total/NA
Manganese	300		0.53	0.27	mg/Kg	20	*	6020	Total/NA
Molybdenum	0.70	J	1.1	0.53	mg/Kg	20	*	6020	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Calscience Irvine

# Detection Summary

Client: Wood E&I Solutions Inc

Project/Site: ACMS - BP Yerington OU-4b\_OU-5 Soil

Job ID: 440-258875-1

## Client Sample ID: WRSB208\_85-95 (Continued)

## Lab Sample ID: 440-258875-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Nickel	5.1		1.1	0.53	mg/Kg	20	⊗	6020	Total/NA
Selenium	1.9		1.1	0.21	mg/Kg	20	⊗	6020	Total/NA
Vanadium	33		1.1	0.53	mg/Kg	20	⊗	6020	Total/NA
Zinc	29		11	5.3	mg/Kg	20	⊗	6020	Total/NA
Sample Homogenized	yes				NONE	1		Homogenization	Total/NA

## Client Sample ID: WRSB208\_95-105

## Lab Sample ID: 440-258875-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	8400		11	8.2	mg/Kg	5	⊗	6010B	Total/NA
Boron	4.9 J		5.3	2.7	mg/Kg	5	⊗	6010B	Total/NA
Calcium	6100		27	14	mg/Kg	5	⊗	6010B	Total/NA
Iron	14000		11	7.4	mg/Kg	5	⊗	6010B	Total/NA
Lithium	8.1		5.3	3.0	mg/Kg	5	⊗	6010B	Total/NA
Magnesium	3200		11	5.3	mg/Kg	5	⊗	6010B	Total/NA
Phosphorus	460		5.3	2.7	mg/Kg	5	⊗	6010B	Total/NA
Potassium	1400		67	35	mg/Kg	5	⊗	6010B	Total/NA
Sodium	730		67	34	mg/Kg	5	⊗	6010B	Total/NA
Strontium	58		5.3	2.7	mg/Kg	5	⊗	6010B	Total/NA
Titanium	300		2.1	1.1	mg/Kg	5	⊗	6010B	Total/NA
Antimony	0.32 J		1.1	0.29	mg/Kg	20	⊗	6020	Total/NA
Arsenic	5.2		0.53	0.27	mg/Kg	20	⊗	6020	Total/NA
Barium	96		0.53	0.27	mg/Kg	20	⊗	6020	Total/NA
Beryllium	0.45		0.32	0.16	mg/Kg	20	⊗	6020	Total/NA
Chromium	8.5		1.1	0.53	mg/Kg	20	⊗	6020	Total/NA
Cobalt	4.2		0.53	0.22	mg/Kg	20	⊗	6020	Total/NA
Copper	44		1.1	0.53	mg/Kg	20	⊗	6020	Total/NA
Lead	4.9		0.53	0.27	mg/Kg	20	⊗	6020	Total/NA
Manganese	280		0.53	0.27	mg/Kg	20	⊗	6020	Total/NA
Molybdenum	0.74 J		1.1	0.53	mg/Kg	20	⊗	6020	Total/NA
Nickel	4.9		1.1	0.53	mg/Kg	20	⊗	6020	Total/NA
Selenium	1.6		1.1	0.21	mg/Kg	20	⊗	6020	Total/NA
Vanadium	32		1.1	0.53	mg/Kg	20	⊗	6020	Total/NA
Zinc	27		11	5.3	mg/Kg	20	⊗	6020	Total/NA
Sample Homogenized	yes				NONE	1		Homogenization	Total/NA

## Client Sample ID: WRSB208\_105-115

## Lab Sample ID: 440-258875-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	9100		11	8.2	mg/Kg	5	⊗	6010B	Total/NA
Boron	7.7		5.3	2.7	mg/Kg	5	⊗	6010B	Total/NA
Calcium	7300		27	14	mg/Kg	5	⊗	6010B	Total/NA
Iron	15000		11	7.4	mg/Kg	5	⊗	6010B	Total/NA
Lithium	9.6		5.3	3.0	mg/Kg	5	⊗	6010B	Total/NA
Magnesium	3500		11	5.3	mg/Kg	5	⊗	6010B	Total/NA
Phosphorus	560		5.3	2.7	mg/Kg	5	⊗	6010B	Total/NA
Potassium	1600		67	35	mg/Kg	5	⊗	6010B	Total/NA
Sodium	980		67	34	mg/Kg	5	⊗	6010B	Total/NA
Strontium	87		5.3	2.7	mg/Kg	5	⊗	6010B	Total/NA
Titanium	380		2.1	1.1	mg/Kg	5	⊗	6010B	Total/NA
Antimony	0.32 J		1.1	0.29	mg/Kg	20	⊗	6020	Total/NA
Arsenic	6.6		0.53	0.27	mg/Kg	20	⊗	6020	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Calscience Irvine

# Detection Summary

Client: Wood E&I Solutions Inc

Project/Site: ACMS - BP Yerington OU-4b\_OU-5 Soil

Job ID: 440-258875-1

## Client Sample ID: WRSB208\_105-115 (Continued)

## Lab Sample ID: 440-258875-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	120		0.53	0.27	mg/Kg	20	*	6020	Total/NA
Beryllium	0.40		0.32	0.16	mg/Kg	20	*	6020	Total/NA
Chromium	8.9		1.1	0.53	mg/Kg	20	*	6020	Total/NA
Cobalt	6.0		0.53	0.22	mg/Kg	20	*	6020	Total/NA
Copper	78		1.1	0.53	mg/Kg	20	*	6020	Total/NA
Lead	5.6		0.53	0.27	mg/Kg	20	*	6020	Total/NA
Manganese	360		0.53	0.27	mg/Kg	20	*	6020	Total/NA
Molybdenum	1.1		1.1	0.53	mg/Kg	20	*	6020	Total/NA
Nickel	5.6		1.1	0.53	mg/Kg	20	*	6020	Total/NA
Selenium	1.6		1.1	0.21	mg/Kg	20	*	6020	Total/NA
Vanadium	34		1.1	0.53	mg/Kg	20	*	6020	Total/NA
Zinc	25		11	5.3	mg/Kg	20	*	6020	Total/NA
Sample Homogenized	yes				NONE	1		Homogenization	Total/NA

## Client Sample ID: WRSB208\_115-125

## Lab Sample ID: 440-258875-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	8400		11	8.2	mg/Kg	5	*	6010B	Total/NA
Boron	9.6		5.3	2.7	mg/Kg	5	*	6010B	Total/NA
Calcium	8300		27	14	mg/Kg	5	*	6010B	Total/NA
Iron	14000		11	7.4	mg/Kg	5	*	6010B	Total/NA
Lithium	10		5.3	3.0	mg/Kg	5	*	6010B	Total/NA
Magnesium	3600		11	5.3	mg/Kg	5	*	6010B	Total/NA
Phosphorus	550		5.3	2.7	mg/Kg	5	*	6010B	Total/NA
Potassium	1400		67	35	mg/Kg	5	*	6010B	Total/NA
Sodium	900		67	34	mg/Kg	5	*	6010B	Total/NA
Strontium	64		5.3	2.7	mg/Kg	5	*	6010B	Total/NA
Titanium	420		2.1	1.1	mg/Kg	5	*	6010B	Total/NA
Antimony	0.35 J		1.1	0.29	mg/Kg	20	*	6020	Total/NA
Arsenic	6.6		0.53	0.27	mg/Kg	20	*	6020	Total/NA
Barium	80		0.53	0.27	mg/Kg	20	*	6020	Total/NA
Beryllium	0.30 J		0.32	0.16	mg/Kg	20	*	6020	Total/NA
Chromium	9.0		1.1	0.53	mg/Kg	20	*	6020	Total/NA
Cobalt	4.5		0.53	0.22	mg/Kg	20	*	6020	Total/NA
Copper	93		1.1	0.53	mg/Kg	20	*	6020	Total/NA
Lead	4.0		0.53	0.27	mg/Kg	20	*	6020	Total/NA
Manganese	220		0.53	0.27	mg/Kg	20	*	6020	Total/NA
Molybdenum	1.2		1.1	0.53	mg/Kg	20	*	6020	Total/NA
Nickel	5.9		1.1	0.53	mg/Kg	20	*	6020	Total/NA
Selenium	1.4		1.1	0.21	mg/Kg	20	*	6020	Total/NA
Vanadium	35		1.1	0.53	mg/Kg	20	*	6020	Total/NA
Zinc	23		11	5.3	mg/Kg	20	*	6020	Total/NA
Mercury	0.014 J		0.021	0.013	mg/Kg	1	*	7471A	Total/NA
Sample Homogenized	yes				NONE	1		Homogenization	Total/NA

## Client Sample ID: WRSB208\_125-131.5

## Lab Sample ID: 440-258875-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	7800		10	7.9	mg/Kg	5	*	6010B	Total/NA
Boron	6.9		5.1	2.6	mg/Kg	5	*	6010B	Total/NA
Calcium	7000		26	14	mg/Kg	5	*	6010B	Total/NA
Iron	14000		10	7.1	mg/Kg	5	*	6010B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Calscience Irvine

# Detection Summary

Client: Wood E&I Solutions Inc

Project/Site: ACMS - BP Yerington OU-4b\_OU-5 Soil

Job ID: 440-258875-1

**Client Sample ID: WRSB208\_125-131.5 (Continued)**

**Lab Sample ID: 440-258875-20**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	8.7		5.1	2.9	mg/Kg	5	*	6010B	Total/NA
Magnesium	3500		10	5.1	mg/Kg	5	*	6010B	Total/NA
Phosphorus	520		5.1	2.6	mg/Kg	5	*	6010B	Total/NA
Potassium	1300		64	33	mg/Kg	5	*	6010B	Total/NA
Sodium	730		64	33	mg/Kg	5	*	6010B	Total/NA
Strontium	55		5.1	2.6	mg/Kg	5	*	6010B	Total/NA
Titanium	390		2.1	1.0	mg/Kg	5	*	6010B	Total/NA
Arsenic	5.4		0.51	0.26	mg/Kg	20	*	6020	Total/NA
Barium	74		0.51	0.26	mg/Kg	20	*	6020	Total/NA
Beryllium	0.32		0.31	0.15	mg/Kg	20	*	6020	Total/NA
Chromium	9.7		1.0	0.51	mg/Kg	20	*	6020	Total/NA
Cobalt	4.4		0.51	0.22	mg/Kg	20	*	6020	Total/NA
Copper	150		1.0	0.51	mg/Kg	20	*	6020	Total/NA
Lead	3.6		0.51	0.26	mg/Kg	20	*	6020	Total/NA
Manganese	200		0.51	0.26	mg/Kg	20	*	6020	Total/NA
Molybdenum	1.2		1.0	0.51	mg/Kg	20	*	6020	Total/NA
Nickel	5.7		1.0	0.51	mg/Kg	20	*	6020	Total/NA
Selenium	1.0		1.0	0.21	mg/Kg	20	*	6020	Total/NA
Vanadium	32		1.0	0.51	mg/Kg	20	*	6020	Total/NA
Zinc	22		10	5.1	mg/Kg	20	*	6020	Total/NA
Sample Homogenized	yes			NONE		1		Homogenization	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Calscience Irvine

# Client Sample Results

Client: Wood E&I Solutions Inc

Job ID: 440-258875-1

Project/Site: ACMS - BP Yerington OU-4b\_OU-5 Soil

**Client Sample ID: WRSB208\_0-0.5**

**Lab Sample ID: 440-258875-1**

Matrix: Solid

Date Collected: 01/07/20 11:15

Date Received: 01/10/20 10:00

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sample Homogenized	yes			NONE				01/13/20 13:58	1

**Client Sample ID: WRSB208\_0-0.5**

**Lab Sample ID: 440-258875-1**

Matrix: Solid

Date Collected: 01/07/20 11:15

Date Received: 01/10/20 10:00

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	7500		11	8.1	mg/Kg	✉	01/13/20 16:29	01/15/20 15:37	5
Boron	4.4 J		5.3	2.6	mg/Kg	✉	01/13/20 16:29	01/15/20 15:37	5
Calcium	7000		26	14	mg/Kg	✉	01/13/20 16:29	01/15/20 15:37	5
Iron	14000		11	7.3	mg/Kg	✉	01/13/20 16:29	01/15/20 15:37	5
Lithium	7.5		5.3	3.0	mg/Kg	✉	01/13/20 16:29	01/15/20 15:37	5
Magnesium	3300		11	5.3	mg/Kg	✉	01/13/20 16:29	01/15/20 15:37	5
Phosphorus	440		5.3	2.6	mg/Kg	✉	01/13/20 16:29	01/15/20 15:37	5
Potassium	1200		66	34	mg/Kg	✉	01/13/20 16:29	01/15/20 15:37	5
Sodium	320		66	34	mg/Kg	✉	01/13/20 16:29	01/15/20 15:37	5
Strontium	69 F2 F1		5.3	2.6	mg/Kg	✉	01/13/20 16:29	01/15/20 15:37	5
Tin	ND		11	5.3	mg/Kg	✉	01/13/20 16:29	01/15/20 15:37	5
Titanium	340		2.1	1.1	mg/Kg	✉	01/13/20 16:29	01/15/20 15:37	5

## Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.54 J F1		1.1	0.28	mg/Kg	✉	01/13/20 16:29	01/14/20 15:41	20
Arsenic	5.4		0.53	0.26	mg/Kg	✉	01/13/20 16:29	01/14/20 15:41	20
Barium	86 F1 F2		0.53	0.26	mg/Kg	✉	01/13/20 16:29	01/14/20 15:41	20
Beryllium	0.47		0.32	0.16	mg/Kg	✉	01/13/20 16:29	01/14/20 15:41	20
Cadmium	ND		0.53	0.26	mg/Kg	✉	01/13/20 16:29	01/14/20 15:41	20
Chromium	6.4		1.1	0.53	mg/Kg	✉	01/13/20 16:29	01/14/20 15:41	20
Cobalt	5.0		0.53	0.22	mg/Kg	✉	01/13/20 16:29	01/14/20 15:41	20
Copper	67 F1		1.1	0.53	mg/Kg	✉	01/13/20 16:29	01/14/20 15:41	20
Lead	5.0		0.53	0.26	mg/Kg	✉	01/13/20 16:29	01/14/20 15:41	20
Manganese	220		0.53	0.26	mg/Kg	✉	01/13/20 16:29	01/14/20 15:41	20
Molybdenum	0.63 J		1.1	0.53	mg/Kg	✉	01/13/20 16:29	01/14/20 15:41	20
Nickel	5.4		1.1	0.53	mg/Kg	✉	01/13/20 16:29	01/14/20 15:41	20
Selenium	1.1		1.1	0.21	mg/Kg	✉	01/13/20 16:29	01/14/20 15:41	20
Silver	ND		0.53	0.11	mg/Kg	✉	01/13/20 16:29	01/14/20 15:41	20
Thallium	ND		0.53	0.26	mg/Kg	✉	01/13/20 16:29	01/14/20 15:41	20
Vanadium	32		1.1	0.53	mg/Kg	✉	01/13/20 16:29	01/14/20 15:41	20
Zinc	22		11	5.3	mg/Kg	✉	01/13/20 16:29	01/14/20 15:41	20

## Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.062		0.021	0.012	mg/Kg	✉	01/17/20 08:41	01/20/20 12:43	1

# Client Sample Results

Client: Wood E&I Solutions Inc

Job ID: 440-258875-1

Project/Site: ACMS - BP Yerington OU-4b\_OU-5 Soil

**Client Sample ID: WRSB208\_0.5-3**

**Lab Sample ID: 440-258875-2**

**Matrix: Solid**

Date Collected: 01/07/20 11:25

Date Received: 01/10/20 10:00

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sample Homogenized	yes			NONE				01/13/20 13:58	1

**Client Sample ID: WRSB208\_0.5-3**

**Lab Sample ID: 440-258875-2**

**Matrix: Solid**

Date Collected: 01/07/20 11:25

Date Received: 01/10/20 10:00

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	7900		11	8.1	mg/Kg	✉	01/13/20 16:29	01/15/20 16:14	5
Boron	4.7	J	5.3	2.6	mg/Kg	✉	01/13/20 16:29	01/15/20 16:14	5
Calcium	6200		26	14	mg/Kg	✉	01/13/20 16:29	01/15/20 16:14	5
Iron	14000		11	7.3	mg/Kg	✉	01/13/20 16:29	01/15/20 16:14	5
Lithium	8.2		5.3	2.9	mg/Kg	✉	01/13/20 16:29	01/15/20 16:14	5
Magnesium	3300		11	5.3	mg/Kg	✉	01/13/20 16:29	01/15/20 16:14	5
Phosphorus	470		5.3	2.6	mg/Kg	✉	01/13/20 16:29	01/15/20 16:14	5
Potassium	1200		66	34	mg/Kg	✉	01/13/20 16:29	01/15/20 16:14	5
Sodium	510		66	34	mg/Kg	✉	01/13/20 16:29	01/15/20 16:14	5
Strontium	60		5.3	2.6	mg/Kg	✉	01/13/20 16:29	01/15/20 16:14	5
Tin	ND		11	5.3	mg/Kg	✉	01/13/20 16:29	01/15/20 16:14	5
Titanium	380		2.1	1.1	mg/Kg	✉	01/13/20 16:29	01/15/20 16:14	5

## Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.35	J	1.1	0.28	mg/Kg	✉	01/13/20 16:29	01/14/20 16:04	20
Arsenic	5.0		0.53	0.26	mg/Kg	✉	01/13/20 16:29	01/14/20 16:04	20
Barium	75		0.53	0.26	mg/Kg	✉	01/13/20 16:29	01/14/20 16:04	20
Beryllium	0.41		0.32	0.16	mg/Kg	✉	01/13/20 16:29	01/14/20 16:04	20
Cadmium	ND		0.53	0.26	mg/Kg	✉	01/13/20 16:29	01/14/20 16:04	20
Chromium	7.7		1.1	0.53	mg/Kg	✉	01/13/20 16:29	01/14/20 16:04	20
Cobalt	4.5		0.53	0.22	mg/Kg	✉	01/13/20 16:29	01/14/20 16:04	20
Copper	66		1.1	0.53	mg/Kg	✉	01/13/20 16:29	01/14/20 16:04	20
Lead	4.0		0.53	0.26	mg/Kg	✉	01/13/20 16:29	01/14/20 16:04	20
Manganese	230		0.53	0.26	mg/Kg	✉	01/13/20 16:29	01/14/20 16:04	20
Molybdenum	0.58	J	1.1	0.53	mg/Kg	✉	01/13/20 16:29	01/14/20 16:04	20
Nickel	5.4		1.1	0.53	mg/Kg	✉	01/13/20 16:29	01/14/20 16:04	20
Selenium	1.2		1.1	0.21	mg/Kg	✉	01/13/20 16:29	01/14/20 16:04	20
Silver	ND		0.53	0.11	mg/Kg	✉	01/13/20 16:29	01/14/20 16:04	20
Thallium	ND		0.53	0.26	mg/Kg	✉	01/13/20 16:29	01/14/20 16:04	20
Vanadium	34		1.1	0.53	mg/Kg	✉	01/13/20 16:29	01/14/20 16:04	20
Zinc	25		11	5.3	mg/Kg	✉	01/13/20 16:29	01/14/20 16:04	20

## Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.021	0.013	mg/Kg	✉	01/17/20 08:41	01/20/20 12:51	1

# Client Sample Results

Client: Wood E&I Solutions Inc

Job ID: 440-258875-1

Project/Site: ACMS - BP Yerington OU-4b\_OU-5 Soil

**Client Sample ID: WRSB208\_3-6**

**Lab Sample ID: 440-258875-3**

Matrix: Solid

Date Collected: 01/07/20 11:35

Date Received: 01/10/20 10:00

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sample Homogenized	yes			NONE				01/13/20 13:58	1

**Client Sample ID: WRSB208\_3-6**

**Lab Sample ID: 440-258875-3**

Matrix: Solid

Date Collected: 01/07/20 11:35

Date Received: 01/10/20 10:00

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	7700		10	8.1	mg/Kg	✉	01/13/20 16:29	01/15/20 16:17	5
Boron	4.8	J	5.2	2.6	mg/Kg	✉	01/13/20 16:29	01/15/20 16:17	5
Calcium	6200		26	14	mg/Kg	✉	01/13/20 16:29	01/15/20 16:17	5
Iron	14000		10	7.2	mg/Kg	✉	01/13/20 16:29	01/15/20 16:17	5
Lithium	7.5		5.2	2.9	mg/Kg	✉	01/13/20 16:29	01/15/20 16:17	5
Magnesium	3300		10	5.2	mg/Kg	✉	01/13/20 16:29	01/15/20 16:17	5
Phosphorus	540		5.2	2.6	mg/Kg	✉	01/13/20 16:29	01/15/20 16:17	5
Potassium	1200		66	34	mg/Kg	✉	01/13/20 16:29	01/15/20 16:17	5
Sodium	560		66	34	mg/Kg	✉	01/13/20 16:29	01/15/20 16:17	5
Strontium	61		5.2	2.6	mg/Kg	✉	01/13/20 16:29	01/15/20 16:17	5
Tin	ND		10	5.2	mg/Kg	✉	01/13/20 16:29	01/15/20 16:17	5
Titanium	350		2.1	1.0	mg/Kg	✉	01/13/20 16:29	01/15/20 16:17	5

## Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.32	J	1.0	0.28	mg/Kg	✉	01/13/20 16:29	01/14/20 16:06	20
Arsenic	4.9		0.52	0.26	mg/Kg	✉	01/13/20 16:29	01/14/20 16:06	20
Barium	94		0.52	0.26	mg/Kg	✉	01/13/20 16:29	01/14/20 16:06	20
Beryllium	0.37		0.31	0.16	mg/Kg	✉	01/13/20 16:29	01/14/20 16:06	20
Cadmium	ND		0.52	0.26	mg/Kg	✉	01/13/20 16:29	01/14/20 16:06	20
Chromium	7.1		1.0	0.52	mg/Kg	✉	01/13/20 16:29	01/14/20 16:06	20
Cobalt	4.7		0.52	0.22	mg/Kg	✉	01/13/20 16:29	01/14/20 16:06	20
Copper	66		1.0	0.52	mg/Kg	✉	01/13/20 16:29	01/14/20 16:06	20
Lead	4.0		0.52	0.26	mg/Kg	✉	01/13/20 16:29	01/14/20 16:06	20
Manganese	270		0.52	0.26	mg/Kg	✉	01/13/20 16:29	01/14/20 16:06	20
Molybdenum	0.64	J	1.0	0.52	mg/Kg	✉	01/13/20 16:29	01/14/20 16:06	20
Nickel	5.6		1.0	0.52	mg/Kg	✉	01/13/20 16:29	01/14/20 16:06	20
Selenium	1.3		1.0	0.21	mg/Kg	✉	01/13/20 16:29	01/14/20 16:06	20
Silver	ND		0.52	0.10	mg/Kg	✉	01/13/20 16:29	01/14/20 16:06	20
Thallium	ND		0.52	0.26	mg/Kg	✉	01/13/20 16:29	01/14/20 16:06	20
Vanadium	33		1.0	0.52	mg/Kg	✉	01/13/20 16:29	01/14/20 16:06	20
Zinc	24		10	5.2	mg/Kg	✉	01/13/20 16:29	01/14/20 16:06	20

## Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.021	0.013	mg/Kg	✉	01/17/20 08:41	01/20/20 12:54	1

# Client Sample Results

Client: Wood E&I Solutions Inc

Job ID: 440-258875-1

Project/Site: ACMS - BP Yerington OU-4b\_OU-5 Soil

**Client Sample ID: WRSB208\_6-15**

**Lab Sample ID: 440-258875-4**

**Matrix: Solid**

Date Collected: 01/07/20 11:42

Date Received: 01/10/20 10:00

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sample Homogenized	yes			NONE				01/13/20 13:58	1

**Client Sample ID: WRSB208\_6-15**

**Lab Sample ID: 440-258875-4**

**Matrix: Solid**

Date Collected: 01/07/20 11:42

**Percent Solids: 95.9**

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	7900		10	8.1	mg/Kg	✉	01/13/20 16:29	01/15/20 16:19	5
Boron	4.8	J	5.2	2.6	mg/Kg	✉	01/13/20 16:29	01/15/20 16:19	5
Calcium	6300		26	14	mg/Kg	✉	01/13/20 16:29	01/15/20 16:19	5
Iron	13000		10	7.2	mg/Kg	✉	01/13/20 16:29	01/15/20 16:19	5
Lithium	7.4		5.2	2.9	mg/Kg	✉	01/13/20 16:29	01/15/20 16:19	5
Magnesium	3300		10	5.2	mg/Kg	✉	01/13/20 16:29	01/15/20 16:19	5
Phosphorus	510		5.2	2.6	mg/Kg	✉	01/13/20 16:29	01/15/20 16:19	5
Potassium	1200		66	34	mg/Kg	✉	01/13/20 16:29	01/15/20 16:19	5
Sodium	540		66	34	mg/Kg	✉	01/13/20 16:29	01/15/20 16:19	5
Strontium	64		5.2	2.6	mg/Kg	✉	01/13/20 16:29	01/15/20 16:19	5
Tin	ND		10	5.2	mg/Kg	✉	01/13/20 16:29	01/15/20 16:19	5
Titanium	320		2.1	1.0	mg/Kg	✉	01/13/20 16:29	01/15/20 16:19	5

## Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.30	J	1.0	0.28	mg/Kg	✉	01/13/20 16:29	01/14/20 16:08	20
Arsenic	5.1		0.52	0.26	mg/Kg	✉	01/13/20 16:29	01/14/20 16:08	20
Barium	81		0.52	0.26	mg/Kg	✉	01/13/20 16:29	01/14/20 16:08	20
Beryllium	0.43		0.31	0.16	mg/Kg	✉	01/13/20 16:29	01/14/20 16:08	20
Cadmium	ND		0.52	0.26	mg/Kg	✉	01/13/20 16:29	01/14/20 16:08	20
Chromium	7.8		1.0	0.52	mg/Kg	✉	01/13/20 16:29	01/14/20 16:08	20
Cobalt	4.5		0.52	0.22	mg/Kg	✉	01/13/20 16:29	01/14/20 16:08	20
Copper	63		1.0	0.52	mg/Kg	✉	01/13/20 16:29	01/14/20 16:08	20
Lead	3.7		0.52	0.26	mg/Kg	✉	01/13/20 16:29	01/14/20 16:08	20
Manganese	210		0.52	0.26	mg/Kg	✉	01/13/20 16:29	01/14/20 16:08	20
Molybdenum	0.53	J	1.0	0.52	mg/Kg	✉	01/13/20 16:29	01/14/20 16:08	20
Nickel	5.5		1.0	0.52	mg/Kg	✉	01/13/20 16:29	01/14/20 16:08	20
Selenium	1.5		1.0	0.21	mg/Kg	✉	01/13/20 16:29	01/14/20 16:08	20
Silver	ND		0.52	0.10	mg/Kg	✉	01/13/20 16:29	01/14/20 16:08	20
Thallium	ND		0.52	0.26	mg/Kg	✉	01/13/20 16:29	01/14/20 16:08	20
Vanadium	32		1.0	0.52	mg/Kg	✉	01/13/20 16:29	01/14/20 16:08	20
Zinc	24		10	5.2	mg/Kg	✉	01/13/20 16:29	01/14/20 16:08	20

## Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.021	0.013	mg/Kg	✉	01/17/20 08:41	01/20/20 12:57	1

# Client Sample Results

Client: Wood E&I Solutions Inc

Job ID: 440-258875-1

Project/Site: ACMS - BP Yerington OU-4b\_OU-5 Soil

**Client Sample ID: WRSB208\_15-25**

**Lab Sample ID: 440-258875-5**

Matrix: Solid

Date Collected: 01/07/20 11:53

Date Received: 01/10/20 10:00

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sample Homogenized	yes			NONE				01/13/20 13:58	1

**Client Sample ID: WRSB208\_15-25**

**Lab Sample ID: 440-258875-5**

Matrix: Solid

Date Collected: 01/07/20 11:53

Date Received: 01/10/20 10:00

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	8300		10	8.0	mg/Kg	✉	01/13/20 16:29	01/15/20 16:21	5
Boron	5.4		5.2	2.6	mg/Kg	✉	01/13/20 16:29	01/15/20 16:21	5
Calcium	6600		26	14	mg/Kg	✉	01/13/20 16:29	01/15/20 16:21	5
Iron	16000		10	7.2	mg/Kg	✉	01/13/20 16:29	01/15/20 16:21	5
Lithium	8.7		5.2	2.9	mg/Kg	✉	01/13/20 16:29	01/15/20 16:21	5
Magnesium	3500		10	5.2	mg/Kg	✉	01/13/20 16:29	01/15/20 16:21	5
Phosphorus	500		5.2	2.6	mg/Kg	✉	01/13/20 16:29	01/15/20 16:21	5
Potassium	1300		65	34	mg/Kg	✉	01/13/20 16:29	01/15/20 16:21	5
Sodium	530		65	33	mg/Kg	✉	01/13/20 16:29	01/15/20 16:21	5
Strontium	59		5.2	2.6	mg/Kg	✉	01/13/20 16:29	01/15/20 16:21	5
Tin	ND		10	5.2	mg/Kg	✉	01/13/20 16:29	01/15/20 16:21	5
Titanium	380		2.1	1.0	mg/Kg	✉	01/13/20 16:29	01/15/20 16:21	5

## Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.43	J	1.0	0.28	mg/Kg	✉	01/13/20 16:29	01/14/20 16:10	20
Arsenic	6.3		0.52	0.26	mg/Kg	✉	01/13/20 16:29	01/14/20 16:10	20
Barium	91		0.52	0.26	mg/Kg	✉	01/13/20 16:29	01/14/20 16:10	20
Beryllium	0.41		0.31	0.16	mg/Kg	✉	01/13/20 16:29	01/14/20 16:10	20
Cadmium	ND		0.52	0.26	mg/Kg	✉	01/13/20 16:29	01/14/20 16:10	20
Chromium	8.7		1.0	0.52	mg/Kg	✉	01/13/20 16:29	01/14/20 16:10	20
Cobalt	4.6		0.52	0.22	mg/Kg	✉	01/13/20 16:29	01/14/20 16:10	20
Copper	110		1.0	0.52	mg/Kg	✉	01/13/20 16:29	01/14/20 16:10	20
Lead	8.3		0.52	0.26	mg/Kg	✉	01/13/20 16:29	01/14/20 16:10	20
Manganese	270		0.52	0.26	mg/Kg	✉	01/13/20 16:29	01/14/20 16:10	20
Molybdenum	1.5		1.0	0.52	mg/Kg	✉	01/13/20 16:29	01/14/20 16:10	20
Nickel	5.8		1.0	0.52	mg/Kg	✉	01/13/20 16:29	01/14/20 16:10	20
Selenium	1.6		1.0	0.21	mg/Kg	✉	01/13/20 16:29	01/14/20 16:10	20
Silver	ND		0.52	0.10	mg/Kg	✉	01/13/20 16:29	01/14/20 16:10	20
Thallium	ND		0.52	0.26	mg/Kg	✉	01/13/20 16:29	01/14/20 16:10	20
Vanadium	36		1.0	0.52	mg/Kg	✉	01/13/20 16:29	01/14/20 16:10	20
Zinc	25		10	5.2	mg/Kg	✉	01/13/20 16:29	01/14/20 16:10	20

## Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.020	0.012	mg/Kg	✉	01/17/20 08:41	01/20/20 12:59	1

# Client Sample Results

Client: Wood E&I Solutions Inc

Job ID: 440-258875-1

Project/Site: ACMS - BP Yerington OU-4b\_OU-5 Soil

**Client Sample ID: WRSB208-FD\_15-25**

**Lab Sample ID: 440-258875-6**

**Matrix: Solid**

Date Collected: 01/07/20 11:58

Date Received: 01/10/20 10:00

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sample Homogenized	yes			NONE				01/13/20 13:58	1

**Client Sample ID: WRSB208-FD\_15-25**

**Lab Sample ID: 440-258875-6**

**Matrix: Solid**

Date Collected: 01/07/20 11:58

Date Received: 01/10/20 10:00

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	8100		10	7.9	mg/Kg	✉	01/13/20 16:29	01/15/20 16:23	5
Boron	4.9	J	5.1	2.6	mg/Kg	✉	01/13/20 16:29	01/15/20 16:23	5
Calcium	6900		26	14	mg/Kg	✉	01/13/20 16:29	01/15/20 16:23	5
Iron	15000		10	7.0	mg/Kg	✉	01/13/20 16:29	01/15/20 16:23	5
Lithium	7.9		5.1	2.9	mg/Kg	✉	01/13/20 16:29	01/15/20 16:23	5
Magnesium	3500		10	5.1	mg/Kg	✉	01/13/20 16:29	01/15/20 16:23	5
Phosphorus	500		5.1	2.6	mg/Kg	✉	01/13/20 16:29	01/15/20 16:23	5
Potassium	1300		64	33	mg/Kg	✉	01/13/20 16:29	01/15/20 16:23	5
Sodium	520		64	33	mg/Kg	✉	01/13/20 16:29	01/15/20 16:23	5
Strontium	61		5.1	2.6	mg/Kg	✉	01/13/20 16:29	01/15/20 16:23	5
Tin	ND		10	5.1	mg/Kg	✉	01/13/20 16:29	01/15/20 16:23	5
Titanium	330		2.0	1.0	mg/Kg	✉	01/13/20 16:29	01/15/20 16:23	5

## Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.37	J	1.0	0.28	mg/Kg	✉	01/13/20 16:29	01/14/20 16:12	20
Arsenic	5.7		0.51	0.26	mg/Kg	✉	01/13/20 16:29	01/14/20 16:12	20
Barium	85		0.51	0.26	mg/Kg	✉	01/13/20 16:29	01/14/20 16:12	20
Beryllium	0.42		0.31	0.15	mg/Kg	✉	01/13/20 16:29	01/14/20 16:12	20
Cadmium	ND		0.51	0.26	mg/Kg	✉	01/13/20 16:29	01/14/20 16:12	20
Chromium	7.9		1.0	0.51	mg/Kg	✉	01/13/20 16:29	01/14/20 16:12	20
Cobalt	5.0		0.51	0.21	mg/Kg	✉	01/13/20 16:29	01/14/20 16:12	20
Copper	110		1.0	0.51	mg/Kg	✉	01/13/20 16:29	01/14/20 16:12	20
Lead	7.3		0.51	0.26	mg/Kg	✉	01/13/20 16:29	01/14/20 16:12	20
Manganese	280		0.51	0.26	mg/Kg	✉	01/13/20 16:29	01/14/20 16:12	20
Molybdenum	1.3		1.0	0.51	mg/Kg	✉	01/13/20 16:29	01/14/20 16:12	20
Nickel	5.9		1.0	0.51	mg/Kg	✉	01/13/20 16:29	01/14/20 16:12	20
Selenium	1.4		1.0	0.20	mg/Kg	✉	01/13/20 16:29	01/14/20 16:12	20
Silver	ND		0.51	0.10	mg/Kg	✉	01/13/20 16:29	01/14/20 16:12	20
Thallium	ND		0.51	0.26	mg/Kg	✉	01/13/20 16:29	01/14/20 16:12	20
Vanadium	34		1.0	0.51	mg/Kg	✉	01/13/20 16:29	01/14/20 16:12	20
Zinc	23		10	5.1	mg/Kg	✉	01/13/20 16:29	01/14/20 16:12	20

## Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.021	0.013	mg/Kg	✉	01/17/20 08:41	01/20/20 13:01	1

# Client Sample Results

Client: Wood E&I Solutions Inc

Job ID: 440-258875-1

Project/Site: ACMS - BP Yerington OU-4b\_OU-5 Soil

**Client Sample ID: WRSB208\_25-35**

**Lab Sample ID: 440-258875-7**

**Matrix: Solid**

Date Collected: 01/07/20 12:10

Date Received: 01/10/20 10:00

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sample Homogenized	yes			NONE				01/13/20 13:58	1

**Client Sample ID: WRSB208\_25-35**

**Lab Sample ID: 440-258875-7**

**Matrix: Solid**

Date Collected: 01/07/20 12:10

**Percent Solids: 96.4**

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	8600		11	8.1	mg/Kg	✉	01/13/20 16:29	01/15/20 16:25	5
Boron	5.7		5.3	2.6	mg/Kg	✉	01/13/20 16:29	01/15/20 16:25	5
Calcium	9600		26	14	mg/Kg	✉	01/13/20 16:29	01/15/20 16:25	5
Iron	15000		11	7.3	mg/Kg	✉	01/13/20 16:29	01/15/20 16:25	5
Lithium	7.8		5.3	2.9	mg/Kg	✉	01/13/20 16:29	01/15/20 16:25	5
Magnesium	3300		11	5.3	mg/Kg	✉	01/13/20 16:29	01/15/20 16:25	5
Phosphorus	510		5.3	2.6	mg/Kg	✉	01/13/20 16:29	01/15/20 16:25	5
Potassium	1500		66	34	mg/Kg	✉	01/13/20 16:29	01/15/20 16:25	5
Sodium	570		66	34	mg/Kg	✉	01/13/20 16:29	01/15/20 16:25	5
Strontium	62		5.3	2.6	mg/Kg	✉	01/13/20 16:29	01/15/20 16:25	5
Tin	ND		11	5.3	mg/Kg	✉	01/13/20 16:29	01/15/20 16:25	5
Titanium	390		2.1	1.1	mg/Kg	✉	01/13/20 16:29	01/15/20 16:25	5

## Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.37	J	1.1	0.28	mg/Kg	✉	01/13/20 16:29	01/14/20 16:14	20
Arsenic	6.0		0.53	0.26	mg/Kg	✉	01/13/20 16:29	01/14/20 16:14	20
Barium	94		0.53	0.26	mg/Kg	✉	01/13/20 16:29	01/14/20 16:14	20
Beryllium	0.35		0.32	0.16	mg/Kg	✉	01/13/20 16:29	01/14/20 16:14	20
Cadmium	ND		0.53	0.26	mg/Kg	✉	01/13/20 16:29	01/14/20 16:14	20
Chromium	10		1.1	0.53	mg/Kg	✉	01/13/20 16:29	01/14/20 16:14	20
Cobalt	4.7		0.53	0.22	mg/Kg	✉	01/13/20 16:29	01/14/20 16:14	20
Copper	130		1.1	0.53	mg/Kg	✉	01/13/20 16:29	01/14/20 16:14	20
Lead	5.6		0.53	0.26	mg/Kg	✉	01/13/20 16:29	01/14/20 16:14	20
Manganese	270		0.53	0.26	mg/Kg	✉	01/13/20 16:29	01/14/20 16:14	20
Molybdenum	1.7		1.1	0.53	mg/Kg	✉	01/13/20 16:29	01/14/20 16:14	20
Nickel	5.9		1.1	0.53	mg/Kg	✉	01/13/20 16:29	01/14/20 16:14	20
Selenium	1.3		1.1	0.21	mg/Kg	✉	01/13/20 16:29	01/14/20 16:14	20
Silver	ND		0.53	0.11	mg/Kg	✉	01/13/20 16:29	01/14/20 16:14	20
Thallium	ND		0.53	0.26	mg/Kg	✉	01/13/20 16:29	01/14/20 16:14	20
Vanadium	34		1.1	0.53	mg/Kg	✉	01/13/20 16:29	01/14/20 16:14	20
Zinc	26		11	5.3	mg/Kg	✉	01/13/20 16:29	01/14/20 16:14	20

## Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.026		0.021	0.013	mg/Kg	✉	01/17/20 08:41	01/20/20 13:08	1

# Client Sample Results

Client: Wood E&I Solutions Inc

Job ID: 440-258875-1

Project/Site: ACMS - BP Yerington OU-4b\_OU-5 Soil

**Client Sample ID: WRSB208\_35-45**

**Lab Sample ID: 440-258875-8**

**Matrix: Solid**

Date Collected: 01/07/20 12:21

Date Received: 01/10/20 10:00

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sample Homogenized	yes			NONE				01/13/20 13:58	1

**Client Sample ID: WRSB208\_35-45**

**Lab Sample ID: 440-258875-8**

**Matrix: Solid**

Date Collected: 01/07/20 12:21

**Percent Solids: 97.7**

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	8900		10	8.0	mg/Kg	✉	01/13/20 16:29	01/15/20 16:28	5
Boron	4.7	J	5.2	2.6	mg/Kg	✉	01/13/20 16:29	01/15/20 16:28	5
Calcium	6200		26	14	mg/Kg	✉	01/13/20 16:29	01/15/20 16:28	5
Iron	15000		10	7.2	mg/Kg	✉	01/13/20 16:29	01/15/20 16:28	5
Lithium	8.0		5.2	2.9	mg/Kg	✉	01/13/20 16:29	01/15/20 16:28	5
Magnesium	3600		10	5.2	mg/Kg	✉	01/13/20 16:29	01/15/20 16:28	5
Phosphorus	540		5.2	2.6	mg/Kg	✉	01/13/20 16:29	01/15/20 16:28	5
Potassium	1400		65	34	mg/Kg	✉	01/13/20 16:29	01/15/20 16:28	5
Sodium	630		65	33	mg/Kg	✉	01/13/20 16:29	01/15/20 16:28	5
Strontium	67		5.2	2.6	mg/Kg	✉	01/13/20 16:29	01/15/20 16:28	5
Tin	ND		10	5.2	mg/Kg	✉	01/13/20 16:29	01/15/20 16:28	5
Titanium	370		2.1	1.0	mg/Kg	✉	01/13/20 16:29	01/15/20 16:28	5

## Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.39	J	1.0	0.28	mg/Kg	✉	01/13/20 16:29	01/14/20 16:16	20
Arsenic	5.0		0.52	0.26	mg/Kg	✉	01/13/20 16:29	01/14/20 16:16	20
Barium	100		0.52	0.26	mg/Kg	✉	01/13/20 16:29	01/14/20 16:16	20
Beryllium	0.43		0.31	0.16	mg/Kg	✉	01/13/20 16:29	01/14/20 16:16	20
Cadmium	ND		0.52	0.26	mg/Kg	✉	01/13/20 16:29	01/14/20 16:16	20
Chromium	11		1.0	0.52	mg/Kg	✉	01/13/20 16:29	01/14/20 16:16	20
Cobalt	4.5		0.52	0.22	mg/Kg	✉	01/13/20 16:29	01/14/20 16:16	20
Copper	68		1.0	0.52	mg/Kg	✉	01/13/20 16:29	01/14/20 16:16	20
Lead	6.3		0.52	0.26	mg/Kg	✉	01/13/20 16:29	01/14/20 16:16	20
Manganese	320		0.52	0.26	mg/Kg	✉	01/13/20 16:29	01/14/20 16:16	20
Molybdenum	1.5		1.0	0.52	mg/Kg	✉	01/13/20 16:29	01/14/20 16:16	20
Nickel	6.1		1.0	0.52	mg/Kg	✉	01/13/20 16:29	01/14/20 16:16	20
Selenium	1.5		1.0	0.21	mg/Kg	✉	01/13/20 16:29	01/14/20 16:16	20
Silver	ND		0.52	0.10	mg/Kg	✉	01/13/20 16:29	01/14/20 16:16	20
Thallium	ND		0.52	0.26	mg/Kg	✉	01/13/20 16:29	01/14/20 16:16	20
Vanadium	33		1.0	0.52	mg/Kg	✉	01/13/20 16:29	01/14/20 16:16	20
Zinc	27		10	5.2	mg/Kg	✉	01/13/20 16:29	01/14/20 16:16	20

## Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.020	0.012	mg/Kg	✉	01/17/20 08:41	01/20/20 13:11	1

# Client Sample Results

Client: Wood E&I Solutions Inc

Job ID: 440-258875-1

Project/Site: ACMS - BP Yerington OU-4b\_OU-5 Soil

**Client Sample ID: WRSB208\_45-55**

**Lab Sample ID: 440-258875-9**

Matrix: Solid

Date Collected: 01/07/20 14:16

Date Received: 01/10/20 10:00

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sample Homogenized	yes			NONE				01/13/20 13:58	1

**Client Sample ID: WRSB208\_45-55**

**Lab Sample ID: 440-258875-9**

Matrix: Solid

Date Collected: 01/07/20 14:16

Date Received: 01/10/20 10:00

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	9000		11	8.2	mg/Kg	✉	01/13/20 16:29	01/15/20 16:47	5
Boron	4.6	J	5.3	2.7	mg/Kg	✉	01/13/20 16:29	01/15/20 16:47	5
Calcium	6700		27	14	mg/Kg	✉	01/13/20 16:29	01/15/20 16:47	5
Iron	14000		11	7.4	mg/Kg	✉	01/13/20 16:29	01/15/20 16:47	5
Lithium	8.0		5.3	3.0	mg/Kg	✉	01/13/20 16:29	01/15/20 16:47	5
Magnesium	3300		11	5.3	mg/Kg	✉	01/13/20 16:29	01/15/20 16:47	5
Phosphorus	420		5.3	2.7	mg/Kg	✉	01/13/20 16:29	01/15/20 16:47	5
Potassium	1500		67	35	mg/Kg	✉	01/13/20 16:29	01/15/20 16:47	5
Sodium	610		67	34	mg/Kg	✉	01/13/20 16:29	01/15/20 16:47	5
Strontium	74		5.3	2.7	mg/Kg	✉	01/13/20 16:29	01/15/20 16:47	5
Tin	ND		11	5.3	mg/Kg	✉	01/13/20 16:29	01/15/20 16:47	5
Titanium	320		2.1	1.1	mg/Kg	✉	01/13/20 16:29	01/15/20 16:47	5

## Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.33	J	1.1	0.29	mg/Kg	✉	01/13/20 16:29	01/14/20 16:18	20
Arsenic	4.7		0.53	0.27	mg/Kg	✉	01/13/20 16:29	01/14/20 16:18	20
Barium	110		0.53	0.27	mg/Kg	✉	01/13/20 16:29	01/14/20 16:18	20
Beryllium	0.54		0.32	0.16	mg/Kg	✉	01/13/20 16:29	01/14/20 16:18	20
Cadmium	ND		0.53	0.27	mg/Kg	✉	01/13/20 16:29	01/14/20 16:18	20
Chromium	9.1		1.1	0.53	mg/Kg	✉	01/13/20 16:29	01/14/20 16:18	20
Cobalt	4.5		0.53	0.22	mg/Kg	✉	01/13/20 16:29	01/14/20 16:18	20
Copper	49		1.1	0.53	mg/Kg	✉	01/13/20 16:29	01/14/20 16:18	20
Lead	5.4		0.53	0.27	mg/Kg	✉	01/13/20 16:29	01/14/20 16:18	20
Manganese	300		0.53	0.27	mg/Kg	✉	01/13/20 16:29	01/14/20 16:18	20
Molybdenum	1.2		1.1	0.53	mg/Kg	✉	01/13/20 16:29	01/14/20 16:18	20
Nickel	5.3		1.1	0.53	mg/Kg	✉	01/13/20 16:29	01/14/20 16:18	20
Selenium	1.6		1.1	0.21	mg/Kg	✉	01/13/20 16:29	01/14/20 16:18	20
Silver	ND		0.53	0.11	mg/Kg	✉	01/13/20 16:29	01/14/20 16:18	20
Thallium	ND		0.53	0.27	mg/Kg	✉	01/13/20 16:29	01/14/20 16:18	20
Vanadium	33		1.1	0.53	mg/Kg	✉	01/13/20 16:29	01/14/20 16:18	20
Zinc	28		11	5.3	mg/Kg	✉	01/13/20 16:29	01/14/20 16:18	20

## Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.021	0.013	mg/Kg	✉	01/17/20 08:41	01/20/20 13:13	1

# Client Sample Results

Client: Wood E&I Solutions Inc

Job ID: 440-258875-1

Project/Site: ACMS - BP Yerington OU-4b\_OU-5 Soil

**Client Sample ID: WRSB208\_55-65**

**Lab Sample ID: 440-258875-11**

Matrix: Solid

Date Collected: 01/07/20 14:33

Date Received: 01/10/20 10:00

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sample Homogenized	yes			NONE				01/13/20 13:58	1

**Client Sample ID: WRSB208\_55-65**

**Lab Sample ID: 440-258875-11**

Matrix: Solid

Date Collected: 01/07/20 14:33

Date Received: 01/10/20 10:00

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	9200		11	8.2	mg/Kg	✉	01/13/20 16:29	01/15/20 16:49	5
Boron	4.8	J	5.3	2.7	mg/Kg	✉	01/13/20 16:29	01/15/20 16:49	5
Calcium	5500		27	14	mg/Kg	✉	01/13/20 16:29	01/15/20 16:49	5
Iron	16000		11	7.4	mg/Kg	✉	01/13/20 16:29	01/15/20 16:49	5
Lithium	8.0		5.3	3.0	mg/Kg	✉	01/13/20 16:29	01/15/20 16:49	5
Magnesium	3300		11	5.3	mg/Kg	✉	01/13/20 16:29	01/15/20 16:49	5
Phosphorus	430		5.3	2.7	mg/Kg	✉	01/13/20 16:29	01/15/20 16:49	5
Potassium	1500		67	35	mg/Kg	✉	01/13/20 16:29	01/15/20 16:49	5
Sodium	600		67	34	mg/Kg	✉	01/13/20 16:29	01/15/20 16:49	5
Strontium	61		5.3	2.7	mg/Kg	✉	01/13/20 16:29	01/15/20 16:49	5
Tin	ND		11	5.3	mg/Kg	✉	01/13/20 16:29	01/15/20 16:49	5
Titanium	380		2.1	1.1	mg/Kg	✉	01/13/20 16:29	01/15/20 16:49	5

## Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.34	J	1.1	0.29	mg/Kg	✉	01/13/20 16:29	01/14/20 16:21	20
Arsenic	4.7		0.53	0.27	mg/Kg	✉	01/13/20 16:29	01/14/20 16:21	20
Barium	99		0.53	0.27	mg/Kg	✉	01/13/20 16:29	01/14/20 16:21	20
Beryllium	0.48		0.32	0.16	mg/Kg	✉	01/13/20 16:29	01/14/20 16:21	20
Cadmium	ND		0.53	0.27	mg/Kg	✉	01/13/20 16:29	01/14/20 16:21	20
Chromium	9.8		1.1	0.53	mg/Kg	✉	01/13/20 16:29	01/14/20 16:21	20
Cobalt	4.4		0.53	0.22	mg/Kg	✉	01/13/20 16:29	01/14/20 16:21	20
Copper	62		1.1	0.53	mg/Kg	✉	01/13/20 16:29	01/14/20 16:21	20
Lead	5.3		0.53	0.27	mg/Kg	✉	01/13/20 16:29	01/14/20 16:21	20
Manganese	300		0.53	0.27	mg/Kg	✉	01/13/20 16:29	01/14/20 16:21	20
Molybdenum	1.6		1.1	0.53	mg/Kg	✉	01/13/20 16:29	01/14/20 16:21	20
Nickel	5.7		1.1	0.53	mg/Kg	✉	01/13/20 16:29	01/14/20 16:21	20
Selenium	1.9		1.1	0.21	mg/Kg	✉	01/13/20 16:29	01/14/20 16:21	20
Silver	ND		0.53	0.11	mg/Kg	✉	01/13/20 16:29	01/14/20 16:21	20
Thallium	ND		0.53	0.27	mg/Kg	✉	01/13/20 16:29	01/14/20 16:21	20
Vanadium	32		1.1	0.53	mg/Kg	✉	01/13/20 16:29	01/14/20 16:21	20
Zinc	28		11	5.3	mg/Kg	✉	01/13/20 16:29	01/14/20 16:21	20

## Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.021	0.013	mg/Kg	✉	01/17/20 08:41	01/20/20 13:15	1

# Client Sample Results

Client: Wood E&I Solutions Inc

Job ID: 440-258875-1

Project/Site: ACMS - BP Yerington OU-4b\_OU-5 Soil

**Client Sample ID: WRSB208\_65-75**

**Lab Sample ID: 440-258875-12**

**Matrix: Solid**

Date Collected: 01/07/20 14:53

Date Received: 01/10/20 10:00

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sample Homogenized	yes			NONE				01/13/20 13:58	1

**Client Sample ID: WRSB208\_65-75**

**Lab Sample ID: 440-258875-12**

**Matrix: Solid**

Date Collected: 01/07/20 14:53

Date Received: 01/10/20 10:00

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	8900		11	8.2	mg/Kg	✉	01/13/20 16:29	01/15/20 16:52	5
Boron	4.6	J	5.3	2.7	mg/Kg	✉	01/13/20 16:29	01/15/20 16:52	5
Calcium	5100		27	14	mg/Kg	✉	01/13/20 16:29	01/15/20 16:52	5
Iron	15000		11	7.3	mg/Kg	✉	01/13/20 16:29	01/15/20 16:52	5
Lithium	7.7		5.3	3.0	mg/Kg	✉	01/13/20 16:29	01/15/20 16:52	5
Magnesium	3100		11	5.3	mg/Kg	✉	01/13/20 16:29	01/15/20 16:52	5
Phosphorus	440		5.3	2.7	mg/Kg	✉	01/13/20 16:29	01/15/20 16:52	5
Potassium	1500		66	34	mg/Kg	✉	01/13/20 16:29	01/15/20 16:52	5
Sodium	590		66	34	mg/Kg	✉	01/13/20 16:29	01/15/20 16:52	5
Strontium	64		5.3	2.7	mg/Kg	✉	01/13/20 16:29	01/15/20 16:52	5
Tin	ND		11	5.3	mg/Kg	✉	01/13/20 16:29	01/15/20 16:52	5
Titanium	380		2.1	1.1	mg/Kg	✉	01/13/20 16:29	01/15/20 16:52	5

## Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.32	J	1.1	0.29	mg/Kg	✉	01/13/20 16:29	01/14/20 16:23	20
Arsenic	4.9		0.53	0.27	mg/Kg	✉	01/13/20 16:29	01/14/20 16:23	20
Barium	110		0.53	0.27	mg/Kg	✉	01/13/20 16:29	01/14/20 16:23	20
Beryllium	0.44		0.32	0.16	mg/Kg	✉	01/13/20 16:29	01/14/20 16:23	20
Cadmium	ND		0.53	0.27	mg/Kg	✉	01/13/20 16:29	01/14/20 16:23	20
Chromium	11		1.1	0.53	mg/Kg	✉	01/13/20 16:29	01/14/20 16:23	20
Cobalt	4.5		0.53	0.22	mg/Kg	✉	01/13/20 16:29	01/14/20 16:23	20
Copper	45		1.1	0.53	mg/Kg	✉	01/13/20 16:29	01/14/20 16:23	20
Lead	5.3		0.53	0.27	mg/Kg	✉	01/13/20 16:29	01/14/20 16:23	20
Manganese	330		0.53	0.27	mg/Kg	✉	01/13/20 16:29	01/14/20 16:23	20
Molybdenum	1.3		1.1	0.53	mg/Kg	✉	01/13/20 16:29	01/14/20 16:23	20
Nickel	5.3		1.1	0.53	mg/Kg	✉	01/13/20 16:29	01/14/20 16:23	20
Selenium	1.9		1.1	0.21	mg/Kg	✉	01/13/20 16:29	01/14/20 16:23	20
Silver	ND		0.53	0.11	mg/Kg	✉	01/13/20 16:29	01/14/20 16:23	20
Thallium	ND		0.53	0.27	mg/Kg	✉	01/13/20 16:29	01/14/20 16:23	20
Vanadium	34		1.1	0.53	mg/Kg	✉	01/13/20 16:29	01/14/20 16:23	20
Zinc	29		11	5.3	mg/Kg	✉	01/13/20 16:29	01/14/20 16:23	20

## Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.021	0.013	mg/Kg	✉	01/17/20 08:41	01/20/20 13:17	1

# Client Sample Results

Client: Wood E&I Solutions Inc

Job ID: 440-258875-1

Project/Site: ACMS - BP Yerington OU-4b\_OU-5 Soil

**Client Sample ID: WRSB208-FD\_65-75**

**Lab Sample ID: 440-258875-13**

Matrix: Solid

Date Collected: 01/07/20 15:03

Date Received: 01/10/20 10:00

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sample Homogenized	yes			NONE				01/13/20 13:58	1

**Client Sample ID: WRSB208-FD\_65-75**

**Lab Sample ID: 440-258875-13**

Matrix: Solid

Date Collected: 01/07/20 15:03

Date Received: 01/10/20 10:00

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	9200		11	8.1	mg/Kg	✉	01/13/20 16:29	01/15/20 16:54	5
Boron	4.7	J	5.3	2.6	mg/Kg	✉	01/13/20 16:29	01/15/20 16:54	5
Calcium	5600		26	14	mg/Kg	✉	01/13/20 16:29	01/15/20 16:54	5
Iron	16000		11	7.3	mg/Kg	✉	01/13/20 16:29	01/15/20 16:54	5
Lithium	8.3		5.3	2.9	mg/Kg	✉	01/13/20 16:29	01/15/20 16:54	5
Magnesium	3100		11	5.3	mg/Kg	✉	01/13/20 16:29	01/15/20 16:54	5
Phosphorus	420		5.3	2.6	mg/Kg	✉	01/13/20 16:29	01/15/20 16:54	5
Potassium	1500		66	34	mg/Kg	✉	01/13/20 16:29	01/15/20 16:54	5
Sodium	600		66	34	mg/Kg	✉	01/13/20 16:29	01/15/20 16:54	5
Strontium	61		5.3	2.6	mg/Kg	✉	01/13/20 16:29	01/15/20 16:54	5
Tin	ND		11	5.3	mg/Kg	✉	01/13/20 16:29	01/15/20 16:54	5
Titanium	410		2.1	1.1	mg/Kg	✉	01/13/20 16:29	01/15/20 16:54	5

## Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.43	J	1.1	0.28	mg/Kg	✉	01/13/20 16:29	01/14/20 16:42	20
Arsenic	6.5		0.53	0.26	mg/Kg	✉	01/13/20 16:29	01/14/20 16:42	20
Barium	97		0.53	0.26	mg/Kg	✉	01/13/20 16:29	01/14/20 16:42	20
Beryllium	0.45		0.32	0.16	mg/Kg	✉	01/13/20 16:29	01/14/20 16:42	20
Cadmium	ND		0.53	0.26	mg/Kg	✉	01/13/20 16:29	01/14/20 16:42	20
Chromium	11		1.1	0.53	mg/Kg	✉	01/13/20 16:29	01/14/20 16:42	20
Cobalt	4.2		0.53	0.22	mg/Kg	✉	01/13/20 16:29	01/14/20 16:42	20
Copper	37		1.1	0.53	mg/Kg	✉	01/13/20 16:29	01/14/20 16:42	20
Lead	5.4		0.53	0.26	mg/Kg	✉	01/13/20 16:29	01/14/20 16:42	20
Manganese	300		0.53	0.26	mg/Kg	✉	01/13/20 16:29	01/14/20 16:42	20
Molybdenum	1.3		1.1	0.53	mg/Kg	✉	01/13/20 16:29	01/14/20 16:42	20
Nickel	5.1		1.1	0.53	mg/Kg	✉	01/13/20 16:29	01/14/20 16:42	20
Selenium	1.6		1.1	0.21	mg/Kg	✉	01/13/20 16:29	01/14/20 16:42	20
Silver	ND		0.53	0.11	mg/Kg	✉	01/13/20 16:29	01/14/20 16:42	20
Thallium	ND		0.53	0.26	mg/Kg	✉	01/13/20 16:29	01/14/20 16:42	20
Vanadium	34		1.1	0.53	mg/Kg	✉	01/13/20 16:29	01/14/20 16:42	20
Zinc	29		11	5.3	mg/Kg	✉	01/13/20 16:29	01/14/20 16:42	20

## Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.021	0.012	mg/Kg	✉	01/17/20 08:41	01/20/20 13:19	1

# Client Sample Results

Client: Wood E&I Solutions Inc

Job ID: 440-258875-1

Project/Site: ACMS - BP Yerington OU-4b\_OU-5 Soil

**Client Sample ID: WRSB208\_75-85**

**Lab Sample ID: 440-258875-14**

**Matrix: Solid**

Date Collected: 01/07/20 15:17

Date Received: 01/10/20 10:00

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sample Homogenized	yes			NONE				01/13/20 13:58	1

**Client Sample ID: WRSB208\_75-85**

**Lab Sample ID: 440-258875-14**

**Matrix: Solid**

Date Collected: 01/07/20 15:17

Date Received: 01/10/20 10:00

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	8800		11	8.3	mg/Kg	✉	01/13/20 16:29	01/15/20 16:56	5
Boron	4.5	J	5.4	2.7	mg/Kg	✉	01/13/20 16:29	01/15/20 16:56	5
Calcium	4800		27	15	mg/Kg	✉	01/13/20 16:29	01/15/20 16:56	5
Iron	15000		11	7.5	mg/Kg	✉	01/13/20 16:29	01/15/20 16:56	5
Lithium	8.2		5.4	3.0	mg/Kg	✉	01/13/20 16:29	01/15/20 16:56	5
Magnesium	3000		11	5.4	mg/Kg	✉	01/13/20 16:29	01/15/20 16:56	5
Phosphorus	430		5.4	2.7	mg/Kg	✉	01/13/20 16:29	01/15/20 16:56	5
Potassium	1500		68	35	mg/Kg	✉	01/13/20 16:29	01/15/20 16:56	5
Sodium	630		68	35	mg/Kg	✉	01/13/20 16:29	01/15/20 16:56	5
Strontium	66		5.4	2.7	mg/Kg	✉	01/13/20 16:29	01/15/20 16:56	5
Tin	ND		11	5.4	mg/Kg	✉	01/13/20 16:29	01/15/20 16:56	5
Titanium	400		2.2	1.1	mg/Kg	✉	01/13/20 16:29	01/15/20 16:56	5

## Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.39	J	1.1	0.29	mg/Kg	✉	01/13/20 16:29	01/14/20 16:45	20
Arsenic	4.6		0.54	0.27	mg/Kg	✉	01/13/20 16:29	01/14/20 16:45	20
Barium	110		0.54	0.27	mg/Kg	✉	01/13/20 16:29	01/14/20 16:45	20
Beryllium	0.51		0.32	0.16	mg/Kg	✉	01/13/20 16:29	01/14/20 16:45	20
Cadmium	ND		0.54	0.27	mg/Kg	✉	01/13/20 16:29	01/14/20 16:45	20
Chromium	9.2		1.1	0.54	mg/Kg	✉	01/13/20 16:29	01/14/20 16:45	20
Cobalt	4.5		0.54	0.23	mg/Kg	✉	01/13/20 16:29	01/14/20 16:45	20
Copper	33		1.1	0.54	mg/Kg	✉	01/13/20 16:29	01/14/20 16:45	20
Lead	5.6		0.54	0.27	mg/Kg	✉	01/13/20 16:29	01/14/20 16:45	20
Manganese	340		0.54	0.27	mg/Kg	✉	01/13/20 16:29	01/14/20 16:45	20
Molybdenum	0.75	J	1.1	0.54	mg/Kg	✉	01/13/20 16:29	01/14/20 16:45	20
Nickel	5.3		1.1	0.54	mg/Kg	✉	01/13/20 16:29	01/14/20 16:45	20
Selenium	1.6		1.1	0.22	mg/Kg	✉	01/13/20 16:29	01/14/20 16:45	20
Silver	ND		0.54	0.11	mg/Kg	✉	01/13/20 16:29	01/14/20 16:45	20
Thallium	ND		0.54	0.27	mg/Kg	✉	01/13/20 16:29	01/14/20 16:45	20
Vanadium	33		1.1	0.54	mg/Kg	✉	01/13/20 16:29	01/14/20 16:45	20
Zinc	28		11	5.4	mg/Kg	✉	01/13/20 16:29	01/14/20 16:45	20

## Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.021	0.013	mg/Kg	✉	01/17/20 08:41	01/20/20 13:22	1

# Client Sample Results

Client: Wood E&I Solutions Inc

Job ID: 440-258875-1

Project/Site: ACMS - BP Yerington OU-4b\_OU-5 Soil

**Client Sample ID: WRSB208\_85-95**

**Lab Sample ID: 440-258875-15**

**Matrix: Solid**

Date Collected: 01/07/20 15:50

Date Received: 01/10/20 10:00

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sample Homogenized	yes			NONE				01/13/20 13:58	1

**Client Sample ID: WRSB208\_85-95**

**Lab Sample ID: 440-258875-15**

**Matrix: Solid**

Date Collected: 01/07/20 15:50

Date Received: 01/10/20 10:00

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	8700		11	8.2	mg/Kg	✉	01/13/20 16:29	01/15/20 16:58	5
Boron	4.3	J	5.3	2.7	mg/Kg	✉	01/13/20 16:29	01/15/20 16:58	5
Calcium	5300		27	14	mg/Kg	✉	01/13/20 16:29	01/15/20 16:58	5
Iron	14000		11	7.4	mg/Kg	✉	01/13/20 16:29	01/15/20 16:58	5
Lithium	7.7		5.3	3.0	mg/Kg	✉	01/13/20 16:29	01/15/20 16:58	5
Magnesium	3100		11	5.3	mg/Kg	✉	01/13/20 16:29	01/15/20 16:58	5
Phosphorus	430		5.3	2.7	mg/Kg	✉	01/13/20 16:29	01/15/20 16:58	5
Potassium	1500		67	35	mg/Kg	✉	01/13/20 16:29	01/15/20 16:58	5
Sodium	740		67	34	mg/Kg	✉	01/13/20 16:29	01/15/20 16:58	5
Strontium	87		5.3	2.7	mg/Kg	✉	01/13/20 16:29	01/15/20 16:58	5
Tin	ND		11	5.3	mg/Kg	✉	01/13/20 16:29	01/15/20 16:58	5
Titanium	320		2.1	1.1	mg/Kg	✉	01/13/20 16:29	01/15/20 16:58	5

## Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.39	J	1.1	0.29	mg/Kg	✉	01/13/20 16:29	01/14/20 16:47	20
Arsenic	6.1		0.53	0.27	mg/Kg	✉	01/13/20 16:29	01/14/20 16:47	20
Barium	170		0.53	0.27	mg/Kg	✉	01/13/20 16:29	01/14/20 16:47	20
Beryllium	0.49		0.32	0.16	mg/Kg	✉	01/13/20 16:29	01/14/20 16:47	20
Cadmium	ND		0.53	0.27	mg/Kg	✉	01/13/20 16:29	01/14/20 16:47	20
Chromium	8.4		1.1	0.53	mg/Kg	✉	01/13/20 16:29	01/14/20 16:47	20
Cobalt	4.3		0.53	0.22	mg/Kg	✉	01/13/20 16:29	01/14/20 16:47	20
Copper	37		1.1	0.53	mg/Kg	✉	01/13/20 16:29	01/14/20 16:47	20
Lead	5.1		0.53	0.27	mg/Kg	✉	01/13/20 16:29	01/14/20 16:47	20
Manganese	300		0.53	0.27	mg/Kg	✉	01/13/20 16:29	01/14/20 16:47	20
Molybdenum	0.70	J	1.1	0.53	mg/Kg	✉	01/13/20 16:29	01/14/20 16:47	20
Nickel	5.1		1.1	0.53	mg/Kg	✉	01/13/20 16:29	01/14/20 16:47	20
Selenium	1.9		1.1	0.21	mg/Kg	✉	01/13/20 16:29	01/14/20 16:47	20
Silver	ND		0.53	0.11	mg/Kg	✉	01/13/20 16:29	01/14/20 16:47	20
Thallium	ND		0.53	0.27	mg/Kg	✉	01/13/20 16:29	01/14/20 16:47	20
Vanadium	33		1.1	0.53	mg/Kg	✉	01/13/20 16:29	01/14/20 16:47	20
Zinc	29		11	5.3	mg/Kg	✉	01/13/20 16:29	01/14/20 16:47	20

## Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.022	0.013	mg/Kg	✉	01/17/20 08:41	01/20/20 13:24	1

# Client Sample Results

Client: Wood E&I Solutions Inc

Job ID: 440-258875-1

Project/Site: ACMS - BP Yerington OU-4b\_OU-5 Soil

## **Client Sample ID: WRSB208\_95-105**

Date Collected: 01/08/20 12:06

Date Received: 01/10/20 10:00

## **Lab Sample ID: 440-258875-16**

Matrix: Solid

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sample Homogenized	yes			NONE				01/13/20 13:58	1

## **Client Sample ID: WRSB208\_95-105**

Date Collected: 01/08/20 12:06

Date Received: 01/10/20 10:00

## **Lab Sample ID: 440-258875-16**

Matrix: Solid

Percent Solids: 94.1

### Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	8400		11	8.2	mg/Kg	✉	01/13/20 16:29	01/15/20 17:00	5
Boron	4.9	J	5.3	2.7	mg/Kg	✉	01/13/20 16:29	01/15/20 17:00	5
Calcium	6100		27	14	mg/Kg	✉	01/13/20 16:29	01/15/20 17:00	5
Iron	14000		11	7.4	mg/Kg	✉	01/13/20 16:29	01/15/20 17:00	5
Lithium	8.1		5.3	3.0	mg/Kg	✉	01/13/20 16:29	01/15/20 17:00	5
Magnesium	3200		11	5.3	mg/Kg	✉	01/13/20 16:29	01/15/20 17:00	5
Phosphorus	460		5.3	2.7	mg/Kg	✉	01/13/20 16:29	01/15/20 17:00	5
Potassium	1400		67	35	mg/Kg	✉	01/13/20 16:29	01/15/20 17:00	5
Sodium	730		67	34	mg/Kg	✉	01/13/20 16:29	01/15/20 17:00	5
Strontium	58		5.3	2.7	mg/Kg	✉	01/13/20 16:29	01/15/20 17:00	5
Tin	ND		11	5.3	mg/Kg	✉	01/13/20 16:29	01/15/20 17:00	5
Titanium	300		2.1	1.1	mg/Kg	✉	01/13/20 16:29	01/15/20 17:00	5

### Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.32	J	1.1	0.29	mg/Kg	✉	01/13/20 16:29	01/14/20 16:49	20
Arsenic	5.2		0.53	0.27	mg/Kg	✉	01/13/20 16:29	01/14/20 16:49	20
Barium	96		0.53	0.27	mg/Kg	✉	01/13/20 16:29	01/14/20 16:49	20
Beryllium	0.45		0.32	0.16	mg/Kg	✉	01/13/20 16:29	01/14/20 16:49	20
Cadmium	ND		0.53	0.27	mg/Kg	✉	01/13/20 16:29	01/14/20 16:49	20
Chromium	8.5		1.1	0.53	mg/Kg	✉	01/13/20 16:29	01/14/20 16:49	20
Cobalt	4.2		0.53	0.22	mg/Kg	✉	01/13/20 16:29	01/14/20 16:49	20
Copper	44		1.1	0.53	mg/Kg	✉	01/13/20 16:29	01/14/20 16:49	20
Lead	4.9		0.53	0.27	mg/Kg	✉	01/13/20 16:29	01/14/20 16:49	20
Manganese	280		0.53	0.27	mg/Kg	✉	01/13/20 16:29	01/14/20 16:49	20
Molybdenum	0.74	J	1.1	0.53	mg/Kg	✉	01/13/20 16:29	01/14/20 16:49	20
Nickel	4.9		1.1	0.53	mg/Kg	✉	01/13/20 16:29	01/14/20 16:49	20
Selenium	1.6		1.1	0.21	mg/Kg	✉	01/13/20 16:29	01/14/20 16:49	20
Silver	ND		0.53	0.11	mg/Kg	✉	01/13/20 16:29	01/14/20 16:49	20
Thallium	ND		0.53	0.27	mg/Kg	✉	01/13/20 16:29	01/14/20 16:49	20
Vanadium	32		1.1	0.53	mg/Kg	✉	01/13/20 16:29	01/14/20 16:49	20
Zinc	27		11	5.3	mg/Kg	✉	01/13/20 16:29	01/14/20 16:49	20

### Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.021	0.013	mg/Kg	✉	01/17/20 08:41	01/20/20 13:26	1

# Client Sample Results

Client: Wood E&I Solutions Inc

Job ID: 440-258875-1

Project/Site: ACMS - BP Yerington OU-4b\_OU-5 Soil

**Client Sample ID: WRSB208\_105-115**

**Lab Sample ID: 440-258875-17**

**Matrix: Solid**

Date Collected: 01/08/20 12:23

Date Received: 01/10/20 10:00

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sample Homogenized	yes			NONE				01/13/20 13:58	1

**Client Sample ID: WRSB208\_105-115**

**Lab Sample ID: 440-258875-17**

**Matrix: Solid**

Date Collected: 01/08/20 12:23

Date Received: 01/10/20 10:00

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	9100		11	8.2	mg/Kg	✉	01/13/20 16:29	01/15/20 17:03	5
Boron	7.7		5.3	2.7	mg/Kg	✉	01/13/20 16:29	01/15/20 17:03	5
Calcium	7300		27	14	mg/Kg	✉	01/13/20 16:29	01/15/20 17:03	5
Iron	15000		11	7.4	mg/Kg	✉	01/13/20 16:29	01/15/20 17:03	5
Lithium	9.6		5.3	3.0	mg/Kg	✉	01/13/20 16:29	01/15/20 17:03	5
Magnesium	3500		11	5.3	mg/Kg	✉	01/13/20 16:29	01/15/20 17:03	5
Phosphorus	560		5.3	2.7	mg/Kg	✉	01/13/20 16:29	01/15/20 17:03	5
Potassium	1600		67	35	mg/Kg	✉	01/13/20 16:29	01/15/20 17:03	5
Sodium	980		67	34	mg/Kg	✉	01/13/20 16:29	01/15/20 17:03	5
Strontium	87		5.3	2.7	mg/Kg	✉	01/13/20 16:29	01/15/20 17:03	5
Tin	ND		11	5.3	mg/Kg	✉	01/13/20 16:29	01/15/20 17:03	5
Titanium	380		2.1	1.1	mg/Kg	✉	01/13/20 16:29	01/15/20 17:03	5

## Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.32	J	1.1	0.29	mg/Kg	✉	01/13/20 16:29	01/14/20 16:51	20
Arsenic	6.6		0.53	0.27	mg/Kg	✉	01/13/20 16:29	01/14/20 16:51	20
Barium	120		0.53	0.27	mg/Kg	✉	01/13/20 16:29	01/14/20 16:51	20
Beryllium	0.40		0.32	0.16	mg/Kg	✉	01/13/20 16:29	01/14/20 16:51	20
Cadmium	ND		0.53	0.27	mg/Kg	✉	01/13/20 16:29	01/14/20 16:51	20
Chromium	8.9		1.1	0.53	mg/Kg	✉	01/13/20 16:29	01/14/20 16:51	20
Cobalt	6.0		0.53	0.22	mg/Kg	✉	01/13/20 16:29	01/14/20 16:51	20
Copper	78		1.1	0.53	mg/Kg	✉	01/13/20 16:29	01/14/20 16:51	20
Lead	5.6		0.53	0.27	mg/Kg	✉	01/13/20 16:29	01/14/20 16:51	20
Manganese	360		0.53	0.27	mg/Kg	✉	01/13/20 16:29	01/14/20 16:51	20
Molybdenum	1.1		1.1	0.53	mg/Kg	✉	01/13/20 16:29	01/14/20 16:51	20
Nickel	5.6		1.1	0.53	mg/Kg	✉	01/13/20 16:29	01/14/20 16:51	20
Selenium	1.6		1.1	0.21	mg/Kg	✉	01/13/20 16:29	01/14/20 16:51	20
Silver	ND		0.53	0.11	mg/Kg	✉	01/13/20 16:29	01/14/20 16:51	20
Thallium	ND		0.53	0.27	mg/Kg	✉	01/13/20 16:29	01/14/20 16:51	20
Vanadium	34		1.1	0.53	mg/Kg	✉	01/13/20 16:29	01/14/20 16:51	20
Zinc	25		11	5.3	mg/Kg	✉	01/13/20 16:29	01/14/20 16:51	20

## Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.021	0.013	mg/Kg	✉	01/17/20 08:41	01/20/20 13:28	1

# Client Sample Results

Client: Wood E&I Solutions Inc

Job ID: 440-258875-1

Project/Site: ACMS - BP Yerington OU-4b\_OU-5 Soil

**Client Sample ID: WRSB208\_115-125**

**Lab Sample ID: 440-258875-19**

Matrix: Solid

Date Collected: 01/08/20 12:42

Date Received: 01/10/20 10:00

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sample Homogenized	yes			NONE				01/13/20 13:58	1

**Client Sample ID: WRSB208\_115-125**

**Lab Sample ID: 440-258875-19**

Matrix: Solid

Date Collected: 01/08/20 12:42

Percent Solids: 95.5

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	8400		11	8.2	mg/Kg	✉	01/13/20 16:29	01/15/20 17:05	5
Boron	9.6		5.3	2.7	mg/Kg	✉	01/13/20 16:29	01/15/20 17:05	5
Calcium	8300		27	14	mg/Kg	✉	01/13/20 16:29	01/15/20 17:05	5
Iron	14000		11	7.4	mg/Kg	✉	01/13/20 16:29	01/15/20 17:05	5
Lithium	10		5.3	3.0	mg/Kg	✉	01/13/20 16:29	01/15/20 17:05	5
Magnesium	3600		11	5.3	mg/Kg	✉	01/13/20 16:29	01/15/20 17:05	5
Phosphorus	550		5.3	2.7	mg/Kg	✉	01/13/20 16:29	01/15/20 17:05	5
Potassium	1400		67	35	mg/Kg	✉	01/13/20 16:29	01/15/20 17:05	5
Sodium	900		67	34	mg/Kg	✉	01/13/20 16:29	01/15/20 17:05	5
Strontium	64		5.3	2.7	mg/Kg	✉	01/13/20 16:29	01/15/20 17:05	5
Tin	ND		11	5.3	mg/Kg	✉	01/13/20 16:29	01/15/20 17:05	5
Titanium	420		2.1	1.1	mg/Kg	✉	01/13/20 16:29	01/15/20 17:05	5

## Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.35	J	1.1	0.29	mg/Kg	✉	01/13/20 16:29	01/14/20 16:53	20
Arsenic	6.6		0.53	0.27	mg/Kg	✉	01/13/20 16:29	01/14/20 16:53	20
Barium	80		0.53	0.27	mg/Kg	✉	01/13/20 16:29	01/14/20 16:53	20
Beryllium	0.30	J	0.32	0.16	mg/Kg	✉	01/13/20 16:29	01/14/20 16:53	20
Cadmium	ND		0.53	0.27	mg/Kg	✉	01/13/20 16:29	01/14/20 16:53	20
Chromium	9.0		1.1	0.53	mg/Kg	✉	01/13/20 16:29	01/14/20 16:53	20
Cobalt	4.5		0.53	0.22	mg/Kg	✉	01/13/20 16:29	01/14/20 16:53	20
Copper	93		1.1	0.53	mg/Kg	✉	01/13/20 16:29	01/14/20 16:53	20
Lead	4.0		0.53	0.27	mg/Kg	✉	01/13/20 16:29	01/14/20 16:53	20
Manganese	220		0.53	0.27	mg/Kg	✉	01/13/20 16:29	01/14/20 16:53	20
Molybdenum	1.2		1.1	0.53	mg/Kg	✉	01/13/20 16:29	01/14/20 16:53	20
Nickel	5.9		1.1	0.53	mg/Kg	✉	01/13/20 16:29	01/14/20 16:53	20
Selenium	1.4		1.1	0.21	mg/Kg	✉	01/13/20 16:29	01/14/20 16:53	20
Silver	ND		0.53	0.11	mg/Kg	✉	01/13/20 16:29	01/14/20 16:53	20
Thallium	ND		0.53	0.27	mg/Kg	✉	01/13/20 16:29	01/14/20 16:53	20
Vanadium	35		1.1	0.53	mg/Kg	✉	01/13/20 16:29	01/14/20 16:53	20
Zinc	23		11	5.3	mg/Kg	✉	01/13/20 16:29	01/14/20 16:53	20

## Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.014	J	0.021	0.013	mg/Kg	✉	01/17/20 08:41	01/20/20 13:35	1

# Client Sample Results

Client: Wood E&I Solutions Inc

Job ID: 440-258875-1

Project/Site: ACMS - BP Yerington OU-4b\_OU-5 Soil

**Client Sample ID: WRSB208\_125-131.5**

**Lab Sample ID: 440-258875-20**

**Matrix: Solid**

Date Collected: 01/08/20 15:57

Date Received: 01/10/20 10:00

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sample Homogenized	yes			NONE				01/13/20 13:58	1

**Client Sample ID: WRSB208\_125-131.5**

**Lab Sample ID: 440-258875-20**

**Matrix: Solid**

Date Collected: 01/08/20 15:57

Date Received: 01/10/20 10:00

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	7800		10	7.9	mg/Kg	✉	01/13/20 16:29	01/15/20 17:07	5
Boron	6.9		5.1	2.6	mg/Kg	✉	01/13/20 16:29	01/15/20 17:07	5
Calcium	7000		26	14	mg/Kg	✉	01/13/20 16:29	01/15/20 17:07	5
Iron	14000		10	7.1	mg/Kg	✉	01/13/20 16:29	01/15/20 17:07	5
Lithium	8.7		5.1	2.9	mg/Kg	✉	01/13/20 16:29	01/15/20 17:07	5
Magnesium	3500		10	5.1	mg/Kg	✉	01/13/20 16:29	01/15/20 17:07	5
Phosphorus	520		5.1	2.6	mg/Kg	✉	01/13/20 16:29	01/15/20 17:07	5
Potassium	1300		64	33	mg/Kg	✉	01/13/20 16:29	01/15/20 17:07	5
Sodium	730		64	33	mg/Kg	✉	01/13/20 16:29	01/15/20 17:07	5
Strontium	55		5.1	2.6	mg/Kg	✉	01/13/20 16:29	01/15/20 17:07	5
Tin	ND		10	5.1	mg/Kg	✉	01/13/20 16:29	01/15/20 17:07	5
Titanium	390		2.1	1.0	mg/Kg	✉	01/13/20 16:29	01/15/20 17:07	5

## Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.0	0.28	mg/Kg	✉	01/13/20 16:29	01/14/20 16:55	20
Arsenic	5.4		0.51	0.26	mg/Kg	✉	01/13/20 16:29	01/14/20 16:55	20
Barium	74		0.51	0.26	mg/Kg	✉	01/13/20 16:29	01/14/20 16:55	20
Beryllium	0.32		0.31	0.15	mg/Kg	✉	01/13/20 16:29	01/14/20 16:55	20
Cadmium	ND		0.51	0.26	mg/Kg	✉	01/13/20 16:29	01/14/20 16:55	20
Chromium	9.7		1.0	0.51	mg/Kg	✉	01/13/20 16:29	01/14/20 16:55	20
Cobalt	4.4		0.51	0.22	mg/Kg	✉	01/13/20 16:29	01/14/20 16:55	20
Copper	150		1.0	0.51	mg/Kg	✉	01/13/20 16:29	01/14/20 16:55	20
Lead	3.6		0.51	0.26	mg/Kg	✉	01/13/20 16:29	01/14/20 16:55	20
Manganese	200		0.51	0.26	mg/Kg	✉	01/13/20 16:29	01/14/20 16:55	20
Molybdenum	1.2		1.0	0.51	mg/Kg	✉	01/13/20 16:29	01/14/20 16:55	20
Nickel	5.7		1.0	0.51	mg/Kg	✉	01/13/20 16:29	01/14/20 16:55	20
Selenium	1.0		1.0	0.21	mg/Kg	✉	01/13/20 16:29	01/14/20 16:55	20
Silver	ND		0.51	0.10	mg/Kg	✉	01/13/20 16:29	01/14/20 16:55	20
Thallium	ND		0.51	0.26	mg/Kg	✉	01/13/20 16:29	01/14/20 16:55	20
Vanadium	32		1.0	0.51	mg/Kg	✉	01/13/20 16:29	01/14/20 16:55	20
Zinc	22		10	5.1	mg/Kg	✉	01/13/20 16:29	01/14/20 16:55	20

## Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.021	0.013	mg/Kg	✉	01/17/20 08:41	01/20/20 13:37	1

# Default Detection Limits

Client: Wood E&I Solutions Inc

Job ID: 440-258875-1

Project/Site: ACMS - BP Yerington OU-4b\_OU-5 Soil

## Method: 6010B - Metals (ICP)

Prep: 3050B

Analyte	RL	MDL	Units
Aluminum	10	7.7	mg/Kg
Boron	5.0	2.5	mg/Kg
Calcium	25	14	mg/Kg
Iron	10	6.9	mg/Kg
Lithium	5.0	2.8	mg/Kg
Magnesium	10	5.0	mg/Kg
Phosphorus	5.0	2.5	mg/Kg
Potassium	63	33	mg/Kg
Sodium	63	32	mg/Kg
Strontium	5.0	2.5	mg/Kg
Tin	10	5.0	mg/Kg
Titanium	2.0	1.0	mg/Kg

## Method: 6020 - Metals (ICP/MS)

Prep: 3050B

Analyte	RL	MDL	Units
Antimony	1.0	0.27	mg/Kg
Arsenic	0.50	0.25	mg/Kg
Barium	0.50	0.25	mg/Kg
Beryllium	0.30	0.15	mg/Kg
Cadmium	0.50	0.25	mg/Kg
Chromium	1.0	0.50	mg/Kg
Cobalt	0.50	0.21	mg/Kg
Copper	1.0	0.50	mg/Kg
Lead	0.50	0.25	mg/Kg
Manganese	0.50	0.25	mg/Kg
Molybdenum	1.0	0.50	mg/Kg
Nickel	1.0	0.50	mg/Kg
Selenium	1.0	0.20	mg/Kg
Silver	0.50	0.10	mg/Kg
Thallium	0.50	0.25	mg/Kg
Vanadium	1.0	0.50	mg/Kg
Zinc	10	5.0	mg/Kg

## Method: 7471A - Mercury (CVAA)

Prep: 7471A

Analyte	RL	MDL	Units
Mercury	0.020	0.012	mg/Kg

# QC Sample Results

Client: Wood E&I Solutions Inc

Project/Site: ACMS - BP Yerington OU-4b\_OU-5 Soil

Job ID: 440-258875-1

## Method: 6010B - Metals (ICP)

**Lab Sample ID: MB 440-590297/1-A ^5**

**Matrix: Solid**

**Analysis Batch: 590755**

Analyte	MB	MB	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							Prepared	Analyzed	Dil Fac
Aluminum	ND				10	7.7	mg/Kg		01/13/20 16:29	01/15/20 15:30	5
Boron	ND				5.0	2.5	mg/Kg		01/13/20 16:29	01/15/20 15:30	5
Calcium	ND				25	14	mg/Kg		01/13/20 16:29	01/15/20 15:30	5
Iron	ND				10	6.9	mg/Kg		01/13/20 16:29	01/15/20 15:30	5
Lithium	ND				5.0	2.8	mg/Kg		01/13/20 16:29	01/15/20 15:30	5
Magnesium	ND				10	5.0	mg/Kg		01/13/20 16:29	01/15/20 15:30	5
Phosphorus	ND				5.0	2.5	mg/Kg		01/13/20 16:29	01/15/20 15:30	5
Potassium	ND				63	33	mg/Kg		01/13/20 16:29	01/15/20 15:30	5
Sodium	ND				63	32	mg/Kg		01/13/20 16:29	01/15/20 15:30	5
Strontium	ND				5.0	2.5	mg/Kg		01/13/20 16:29	01/15/20 15:30	5
Tin	ND				10	5.0	mg/Kg		01/13/20 16:29	01/15/20 15:30	5
Titanium	ND				2.0	1.0	mg/Kg		01/13/20 16:29	01/15/20 15:30	5

**Lab Sample ID: LCS 440-590297/2-A ^5**

**Matrix: Solid**

**Analysis Batch: 590755**

Analyte	Spike	LCS	LCS	Result	Qualifier	Unit	D	%Rec	Limits	%Rec.
	Added	Result	Qualifier							
Aluminum	50.3	46.3		mg/Kg				92	80 - 120	
Boron	50.3	45.1		mg/Kg				90	80 - 120	
Calcium	251	238		mg/Kg				95	80 - 120	
Iron	50.3	52.2		mg/Kg				104	80 - 120	
Lithium	50.3	46.6		mg/Kg				93	80 - 120	
Magnesium	251	235		mg/Kg				94	80 - 120	
Phosphorus	50.3	46.1		mg/Kg				92	80 - 120	
Potassium	503	460		mg/Kg				92	80 - 120	
Sodium	503	461		mg/Kg				92	80 - 120	
Strontium	50.3	46.6		mg/Kg				93	80 - 120	
Tin	50.3	47.5		mg/Kg				95	80 - 120	
Titanium	50.3	47.4		mg/Kg				94	80 - 120	

**Lab Sample ID: 440-258875-1 MS**

**Matrix: Solid**

**Analysis Batch: 590755**

Analyte	Sample	Sample	Spike	MS	MS	Result	Qualifier	Unit	D	%Rec	Limits	%Rec.
	Result	Qualifier	Added	Result	Qualifier							
Aluminum	7500		53.3	9430	4	mg/Kg	⊗	3645	75 - 125			
Boron	4.4	J	53.3	48.3		mg/Kg	⊗	83	75 - 125			
Calcium	7000		266	8260	4	mg/Kg	⊗	467	75 - 125			
Iron	14000		53.3	12800	4	mg/Kg	⊗	-2300	75 - 125			
Lithium	7.5		53.3	54.0		mg/Kg	⊗	87	75 - 125			
Magnesium	3300		266	3440	4	mg/Kg	⊗	58	75 - 125			
Phosphorus	440		53.3	475	4	mg/Kg	⊗	57	75 - 125			
Potassium	1200		533	1760		mg/Kg	⊗	114	75 - 125			
Sodium	320		533	966		mg/Kg	⊗	121	75 - 125			
Strontium	69	F2 F1	53.3	144	F1	mg/Kg	⊗	141	75 - 125			
Tin	ND		53.3	46.5		mg/Kg	⊗	87	75 - 125			
Titanium	340		53.3	441	4	mg/Kg	⊗	191	75 - 125			

**Client Sample ID: WRSB208\_0-0.5**

**Prep Type: Total/NA**

**Prep Batch: 590297**

# QC Sample Results

Client: Wood E&I Solutions Inc

Project/Site: ACMS - BP Yerington OU-4b\_OU-5 Soil

Job ID: 440-258875-1

## Method: 6010B - Metals (ICP) (Continued)

**Lab Sample ID: 440-258875-1 MSD**

**Matrix: Solid**

**Analysis Batch: 590755**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	Limits	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier						
Aluminum	7500		52.7	9560	4	mg/Kg	⊗	3928	75 - 125	1	20
Boron	4.4	J	52.7	49.5		mg/Kg	⊗	86	75 - 125	3	20
Calcium	7000		264	7600	4	mg/Kg	⊗	221	75 - 125	8	20
Iron	14000		52.7	14000	4	mg/Kg	⊗	50	75 - 125	9	20
Lithium	7.5		52.7	55.4		mg/Kg	⊗	91	75 - 125	3	20
Magnesium	3300		264	3940	4	mg/Kg	⊗	251	75 - 125	14	20
Phosphorus	440		52.7	524	4	mg/Kg	⊗	151	75 - 125	10	20
Potassium	1200		527	1760		mg/Kg	⊗	115	75 - 125	0	20
Sodium	320		527	825		mg/Kg	⊗	95	75 - 125	16	20
Strontium	69	F2 F1	52.7	109	F2	mg/Kg	⊗	76	75 - 125	28	20
Tin	ND		52.7	46.1		mg/Kg	⊗	88	75 - 125	1	20
Titanium	340		52.7	501	4	mg/Kg	⊗	307	75 - 125	13	20

## Method: 6020 - Metals (ICP/MS)

**Lab Sample ID: MB 440-590297/1-A ^20**

**Matrix: Solid**

**Analysis Batch: 590542**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Antimony	ND		1.0	0.27	mg/Kg		01/13/20 16:29	01/14/20 15:37	20
Arsenic	ND		0.50	0.25	mg/Kg		01/13/20 16:29	01/14/20 15:37	20
Barium	ND		0.50	0.25	mg/Kg		01/13/20 16:29	01/14/20 15:37	20
Beryllium	ND		0.30	0.15	mg/Kg		01/13/20 16:29	01/14/20 15:37	20
Cadmium	ND		0.50	0.25	mg/Kg		01/13/20 16:29	01/14/20 15:37	20
Chromium	ND		1.0	0.50	mg/Kg		01/13/20 16:29	01/14/20 15:37	20
Cobalt	ND		0.50	0.21	mg/Kg		01/13/20 16:29	01/14/20 15:37	20
Copper	ND		1.0	0.50	mg/Kg		01/13/20 16:29	01/14/20 15:37	20
Lead	ND		0.50	0.25	mg/Kg		01/13/20 16:29	01/14/20 15:37	20
Manganese	ND		0.50	0.25	mg/Kg		01/13/20 16:29	01/14/20 15:37	20
Molybdenum	ND		1.0	0.50	mg/Kg		01/13/20 16:29	01/14/20 15:37	20
Nickel	ND		1.0	0.50	mg/Kg		01/13/20 16:29	01/14/20 15:37	20
Selenium	ND		1.0	0.20	mg/Kg		01/13/20 16:29	01/14/20 15:37	20
Silver	ND		0.50	0.10	mg/Kg		01/13/20 16:29	01/14/20 15:37	20
Thallium	ND		0.50	0.25	mg/Kg		01/13/20 16:29	01/14/20 15:37	20
Vanadium	ND		1.0	0.50	mg/Kg		01/13/20 16:29	01/14/20 15:37	20
Zinc	ND		10	5.0	mg/Kg		01/13/20 16:29	01/14/20 15:37	20

**Lab Sample ID: LCS 440-590297/2-A ^20**

**Matrix: Solid**

**Analysis Batch: 590542**

Analyte	Spike		LCS	LCS	Unit	D	%Rec	Limits
	Added	Result	Qualifier	Unit				
Antimony	50.3	46.9		mg/Kg		93	80 - 120	
Arsenic	50.3	45.9		mg/Kg		91	80 - 120	
Barium	50.3	46.8		mg/Kg		93	80 - 120	
Beryllium	50.3	45.6		mg/Kg		91	80 - 120	
Cadmium	50.3	45.6		mg/Kg		91	80 - 120	
Chromium	50.3	45.7		mg/Kg		91	80 - 120	

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 590297**

# QC Sample Results

Client: Wood E&I Solutions Inc

Project/Site: ACMS - BP Yerington OU-4b\_OU-5 Soil

Job ID: 440-258875-1

## Method: 6020 - Metals (ICP/MS) (Continued)

**Lab Sample ID: LCS 440-590297/2-A ^20**

**Matrix: Solid**

**Analysis Batch: 590542**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 590297**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	Limits
Cobalt	50.3	45.8		mg/Kg		91	80 - 120	
Copper	50.3	46.3		mg/Kg		92	80 - 120	
Lead	50.3	45.6		mg/Kg		91	80 - 120	
Manganese	50.3	45.3		mg/Kg		90	80 - 120	
Molybdenum	50.3	45.4		mg/Kg		90	80 - 120	
Nickel	50.3	46.0		mg/Kg		92	80 - 120	
Selenium	50.3	45.7		mg/Kg		91	80 - 120	
Silver	25.1	24.1		mg/Kg		96	80 - 120	
Thallium	50.3	45.6		mg/Kg		91	80 - 120	
Vanadium	50.3	45.3		mg/Kg		90	80 - 120	
Zinc	50.3	45.2		mg/Kg		90	80 - 120	

**Lab Sample ID: 440-258875-1 MS**

**Matrix: Solid**

**Analysis Batch: 590542**

**Client Sample ID: WRSB208\_0-0.5**

**Prep Type: Total/NA**

**Prep Batch: 590297**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec.	Limits
Antimony	0.54	J F1	53.3	33.7	F1	mg/Kg	⊗	62	75 - 125	
Arsenic	5.4		53.3	50.0		mg/Kg	⊗	84	75 - 125	
Barium	86	F1 F2	53.3	176	F1	mg/Kg	⊗	169	75 - 125	
Beryllium	0.47		53.3	44.9		mg/Kg	⊗	83	75 - 125	
Cadmium	ND		53.3	45.6		mg/Kg	⊗	86	75 - 125	
Chromium	6.4		53.3	50.6		mg/Kg	⊗	83	75 - 125	
Cobalt	5.0		53.3	48.4		mg/Kg	⊗	81	75 - 125	
Copper	67	F1	53.3	105	F1	mg/Kg	⊗	72	75 - 125	
Lead	5.0		53.3	49.1		mg/Kg	⊗	83	75 - 125	
Manganese	220		53.3	294	4	mg/Kg	⊗	146	75 - 125	
Molybdenum	0.63	J	53.3	45.2		mg/Kg	⊗	84	75 - 125	
Nickel	5.4		53.3	48.9		mg/Kg	⊗	82	75 - 125	
Selenium	1.1		53.3	45.0		mg/Kg	⊗	83	75 - 125	
Silver	ND		26.6	23.9		mg/Kg	⊗	90	75 - 125	
Thallium	ND		53.3	45.0		mg/Kg	⊗	84	75 - 125	
Vanadium	32		53.3	73.6		mg/Kg	⊗	79	75 - 125	
Zinc	22		53.3	66.7		mg/Kg	⊗	83	75 - 125	

**Lab Sample ID: 440-258875-1 MSD**

**Matrix: Solid**

**Analysis Batch: 590542**

**Client Sample ID: WRSB208\_0-0.5**

**Prep Type: Total/NA**

**Prep Batch: 590297**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec.	RPD	RPD Limit
Antimony	0.54	J F1	52.7	34.0	F1	mg/Kg	⊗	63	75 - 125	1	20
Arsenic	5.4		52.7	50.3		mg/Kg	⊗	85	75 - 125	1	20
Barium	86	F1 F2	52.7	121	F1 F2	mg/Kg	⊗	66	75 - 125	37	20
Beryllium	0.47		52.7	44.4		mg/Kg	⊗	83	75 - 125	1	20
Cadmium	ND		52.7	46.3		mg/Kg	⊗	88	75 - 125	2	20
Chromium	6.4		52.7	51.4		mg/Kg	⊗	85	75 - 125	2	20
Cobalt	5.0		52.7	48.3		mg/Kg	⊗	82	75 - 125	0	20
Copper	67	F1	52.7	109		mg/Kg	⊗	81	75 - 125	4	20
Lead	5.0		52.7	49.1		mg/Kg	⊗	84	75 - 125	0	20

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# QC Sample Results

Client: Wood E&I Solutions Inc

Project/Site: ACMS - BP Yerington OU-4b\_OU-5 Soil

Job ID: 440-258875-1

## Method: 6020 - Metals (ICP/MS) (Continued)

**Lab Sample ID: 440-258875-1 MSD**

**Matrix: Solid**

**Analysis Batch: 590542**

**Client Sample ID: WRSB208\_0-0.5**

**Prep Type: Total/NA**

**Prep Batch: 590297**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier							
Manganese	220		52.7	258	4	mg/Kg	⊗	78	75 - 125	13		20
Molybdenum	0.63	J	52.7	45.2		mg/Kg	⊗	85	75 - 125	0		20
Nickel	5.4		52.7	49.3		mg/Kg	⊗	83	75 - 125	1		20
Selenium	1.1		52.7	45.8		mg/Kg	⊗	85	75 - 125	2		20
Silver	ND		26.4	24.2		mg/Kg	⊗	92	75 - 125	1		20
Thallium	ND		52.7	45.0		mg/Kg	⊗	85	75 - 125	0		20
Vanadium	32		52.7	75.9		mg/Kg	⊗	84	75 - 125	3		20
Zinc	22		52.7	68.3		mg/Kg	⊗	87	75 - 125	2		20

## Method: 7471A - Mercury (CVAA)

**Lab Sample ID: MB 440-590447/1-A**

**Matrix: Solid**

**Analysis Batch: 591651**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 590447**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	ND		0.020	0.012	mg/Kg		01/17/20 08:41	01/20/20 12:39	1

**Lab Sample ID: LCS 440-590447/2-A**

**Matrix: Solid**

**Analysis Batch: 591651**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 590447**

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.	Limits
	Added	Result	Qualifier					
Mercury	0.400	0.373		mg/Kg		93	80 - 120	

**Lab Sample ID: 440-258875-1 MS**

**Matrix: Solid**

**Analysis Batch: 591651**

**Client Sample ID: WRSB208\_0-0.5**

**Prep Type: Total/NA**

**Prep Batch: 590447**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier	Added	Result	Qualifier					
Mercury	0.062		0.420	0.399		mg/Kg	⊗	80	75 - 125	

**Lab Sample ID: 440-258875-1 MSD**

**Matrix: Solid**

**Analysis Batch: 591651**

**Client Sample ID: WRSB208\_0-0.5**

**Prep Type: Total/NA**

**Prep Batch: 590447**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier							
Mercury	0.062		0.420	0.409		mg/Kg	⊗	83	75 - 125	3		20

## Method: Homogenization - Homogenization

**Lab Sample ID: 440-258875-1 DU**

**Matrix: Solid**

**Analysis Batch: 590265**

**Client Sample ID: WRSB208\_0-0.5**

**Prep Type: Total/NA**

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	RPD	Limit
	Result	Qualifier							
Sample Homogenized	yes		yes		NONE				

# QC Association Summary

Client: Wood E&I Solutions Inc

Job ID: 440-258875-1

Project/Site: ACMS - BP Yerington OU-4b\_OU-5 Soil

## Metals

### Prep Batch: 590297

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-258875-1	WRSB208_0-0.5	Total/NA	Solid	3050B	
440-258875-2	WRSB208_0.5-3	Total/NA	Solid	3050B	
440-258875-3	WRSB208_3-6	Total/NA	Solid	3050B	
440-258875-4	WRSB208_6-15	Total/NA	Solid	3050B	
440-258875-5	WRSB208_15-25	Total/NA	Solid	3050B	
440-258875-6	WRSB208-FD_15-25	Total/NA	Solid	3050B	
440-258875-7	WRSB208_25-35	Total/NA	Solid	3050B	
440-258875-8	WRSB208_35-45	Total/NA	Solid	3050B	
440-258875-9	WRSB208_45-55	Total/NA	Solid	3050B	
440-258875-11	WRSB208_55-65	Total/NA	Solid	3050B	
440-258875-12	WRSB208_65-75	Total/NA	Solid	3050B	
440-258875-13	WRSB208-FD_65-75	Total/NA	Solid	3050B	
440-258875-14	WRSB208_75-85	Total/NA	Solid	3050B	
440-258875-15	WRSB208_85-95	Total/NA	Solid	3050B	
440-258875-16	WRSB208_95-105	Total/NA	Solid	3050B	
440-258875-17	WRSB208_105-115	Total/NA	Solid	3050B	
440-258875-19	WRSB208_115-125	Total/NA	Solid	3050B	
440-258875-20	WRSB208_125-131.5	Total/NA	Solid	3050B	
MB 440-590297/1-A ^20	Method Blank	Total/NA	Solid	3050B	
MB 440-590297/1-A ^5	Method Blank	Total/NA	Solid	3050B	
LCS 440-590297/2-A ^20	Lab Control Sample	Total/NA	Solid	3050B	
LCS 440-590297/2-A ^5	Lab Control Sample	Total/NA	Solid	3050B	
440-258875-1 MS	WRSB208_0-0.5	Total/NA	Solid	3050B	
440-258875-1 MSD	WRSB208_0-0.5	Total/NA	Solid	3050B	

### Prep Batch: 590447

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-258875-1	WRSB208_0-0.5	Total/NA	Solid	7471A	
440-258875-2	WRSB208_0.5-3	Total/NA	Solid	7471A	
440-258875-3	WRSB208_3-6	Total/NA	Solid	7471A	
440-258875-4	WRSB208_6-15	Total/NA	Solid	7471A	
440-258875-5	WRSB208_15-25	Total/NA	Solid	7471A	
440-258875-6	WRSB208-FD_15-25	Total/NA	Solid	7471A	
440-258875-7	WRSB208_25-35	Total/NA	Solid	7471A	
440-258875-8	WRSB208_35-45	Total/NA	Solid	7471A	
440-258875-9	WRSB208_45-55	Total/NA	Solid	7471A	
440-258875-11	WRSB208_55-65	Total/NA	Solid	7471A	
440-258875-12	WRSB208_65-75	Total/NA	Solid	7471A	
440-258875-13	WRSB208-FD_65-75	Total/NA	Solid	7471A	
440-258875-14	WRSB208_75-85	Total/NA	Solid	7471A	
440-258875-15	WRSB208_85-95	Total/NA	Solid	7471A	
440-258875-16	WRSB208_95-105	Total/NA	Solid	7471A	
440-258875-17	WRSB208_105-115	Total/NA	Solid	7471A	
440-258875-19	WRSB208_115-125	Total/NA	Solid	7471A	
440-258875-20	WRSB208_125-131.5	Total/NA	Solid	7471A	
MB 440-590447/1-A	Method Blank	Total/NA	Solid	7471A	
LCS 440-590447/2-A	Lab Control Sample	Total/NA	Solid	7471A	
440-258875-1 MS	WRSB208_0-0.5	Total/NA	Solid	7471A	
440-258875-1 MSD	WRSB208_0-0.5	Total/NA	Solid	7471A	

# QC Association Summary

Client: Wood E&I Solutions Inc

Project/Site: ACMS - BP Yerington OU-4b\_OU-5 Soil

Job ID: 440-258875-1

## Metals

### Analysis Batch: 590542

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-258875-1	WRSB208_0-0.5	Total/NA	Solid	6020	590297
440-258875-2	WRSB208_0.5-3	Total/NA	Solid	6020	590297
440-258875-3	WRSB208_3-6	Total/NA	Solid	6020	590297
440-258875-4	WRSB208_6-15	Total/NA	Solid	6020	590297
440-258875-5	WRSB208_15-25	Total/NA	Solid	6020	590297
440-258875-6	WRSB208-FD_15-25	Total/NA	Solid	6020	590297
440-258875-7	WRSB208_25-35	Total/NA	Solid	6020	590297
440-258875-8	WRSB208_35-45	Total/NA	Solid	6020	590297
440-258875-9	WRSB208_45-55	Total/NA	Solid	6020	590297
440-258875-11	WRSB208_55-65	Total/NA	Solid	6020	590297
440-258875-12	WRSB208_65-75	Total/NA	Solid	6020	590297
440-258875-13	WRSB208-FD_65-75	Total/NA	Solid	6020	590297
440-258875-14	WRSB208_75-85	Total/NA	Solid	6020	590297
440-258875-15	WRSB208_85-95	Total/NA	Solid	6020	590297
440-258875-16	WRSB208_95-105	Total/NA	Solid	6020	590297
440-258875-17	WRSB208_105-115	Total/NA	Solid	6020	590297
440-258875-19	WRSB208_115-125	Total/NA	Solid	6020	590297
440-258875-20	WRSB208_125-131.5	Total/NA	Solid	6020	590297
MB 440-590297/1-A ^20	Method Blank	Total/NA	Solid	6020	590297
LCS 440-590297/2-A ^20	Lab Control Sample	Total/NA	Solid	6020	590297
440-258875-1 MS	WRSB208_0-0.5	Total/NA	Solid	6020	590297
440-258875-1 MSD	WRSB208_0-0.5	Total/NA	Solid	6020	590297

### Analysis Batch: 590755

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-258875-1	WRSB208_0-0.5	Total/NA	Solid	6010B	590297
440-258875-2	WRSB208_0.5-3	Total/NA	Solid	6010B	590297
440-258875-3	WRSB208_3-6	Total/NA	Solid	6010B	590297
440-258875-4	WRSB208_6-15	Total/NA	Solid	6010B	590297
440-258875-5	WRSB208_15-25	Total/NA	Solid	6010B	590297
440-258875-6	WRSB208-FD_15-25	Total/NA	Solid	6010B	590297
440-258875-7	WRSB208_25-35	Total/NA	Solid	6010B	590297
440-258875-8	WRSB208_35-45	Total/NA	Solid	6010B	590297
440-258875-9	WRSB208_45-55	Total/NA	Solid	6010B	590297
440-258875-11	WRSB208_55-65	Total/NA	Solid	6010B	590297
440-258875-12	WRSB208_65-75	Total/NA	Solid	6010B	590297
440-258875-13	WRSB208-FD_65-75	Total/NA	Solid	6010B	590297
440-258875-14	WRSB208_75-85	Total/NA	Solid	6010B	590297
440-258875-15	WRSB208_85-95	Total/NA	Solid	6010B	590297
440-258875-16	WRSB208_95-105	Total/NA	Solid	6010B	590297
440-258875-17	WRSB208_105-115	Total/NA	Solid	6010B	590297
440-258875-19	WRSB208_115-125	Total/NA	Solid	6010B	590297
440-258875-20	WRSB208_125-131.5	Total/NA	Solid	6010B	590297
MB 440-590297/1-A ^5	Method Blank	Total/NA	Solid	6010B	590297
LCS 440-590297/2-A ^5	Lab Control Sample	Total/NA	Solid	6010B	590297
440-258875-1 MS	WRSB208_0-0.5	Total/NA	Solid	6010B	590297
440-258875-1 MSD	WRSB208_0-0.5	Total/NA	Solid	6010B	590297

### Analysis Batch: 591651

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-258875-1	WRSB208_0-0.5	Total/NA	Solid	7471A	590447

Eurofins Calscience Irvine

# QC Association Summary

Client: Wood E&I Solutions Inc

Project/Site: ACMS - BP Yerington OU-4b\_OU-5 Soil

Job ID: 440-258875-1

## Metals (Continued)

### Analysis Batch: 591651 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-258875-2	WRSB208_0.5-3	Total/NA	Solid	7471A	590447
440-258875-3	WRSB208_3-6	Total/NA	Solid	7471A	590447
440-258875-4	WRSB208_6-15	Total/NA	Solid	7471A	590447
440-258875-5	WRSB208_15-25	Total/NA	Solid	7471A	590447
440-258875-6	WRSB208-FD_15-25	Total/NA	Solid	7471A	590447
440-258875-7	WRSB208_25-35	Total/NA	Solid	7471A	590447
440-258875-8	WRSB208_35-45	Total/NA	Solid	7471A	590447
440-258875-9	WRSB208_45-55	Total/NA	Solid	7471A	590447
440-258875-11	WRSB208_55-65	Total/NA	Solid	7471A	590447
440-258875-12	WRSB208_65-75	Total/NA	Solid	7471A	590447
440-258875-13	WRSB208-FD_65-75	Total/NA	Solid	7471A	590447
440-258875-14	WRSB208_75-85	Total/NA	Solid	7471A	590447
440-258875-15	WRSB208_85-95	Total/NA	Solid	7471A	590447
440-258875-16	WRSB208_95-105	Total/NA	Solid	7471A	590447
440-258875-17	WRSB208_105-115	Total/NA	Solid	7471A	590447
440-258875-19	WRSB208_115-125	Total/NA	Solid	7471A	590447
440-258875-20	WRSB208_125-131.5	Total/NA	Solid	7471A	590447
MB 440-590447/1-A	Method Blank	Total/NA	Solid	7471A	590447
LCS 440-590447/2-A	Lab Control Sample	Total/NA	Solid	7471A	590447
440-258875-1 MS	WRSB208_0-0.5	Total/NA	Solid	7471A	590447
440-258875-1 MSD	WRSB208_0-0.5	Total/NA	Solid	7471A	590447

## General Chemistry

### Analysis Batch: 590265

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-258875-1	WRSB208_0-0.5	Total/NA	Solid	Homogenization	
440-258875-2	WRSB208_0.5-3	Total/NA	Solid	Homogenization	
440-258875-3	WRSB208_3-6	Total/NA	Solid	Homogenization	
440-258875-4	WRSB208_6-15	Total/NA	Solid	Homogenization	
440-258875-5	WRSB208_15-25	Total/NA	Solid	Homogenization	
440-258875-6	WRSB208-FD_15-25	Total/NA	Solid	Homogenization	
440-258875-7	WRSB208_25-35	Total/NA	Solid	Homogenization	
440-258875-8	WRSB208_35-45	Total/NA	Solid	Homogenization	
440-258875-9	WRSB208_45-55	Total/NA	Solid	Homogenization	
440-258875-11	WRSB208_55-65	Total/NA	Solid	Homogenization	
440-258875-12	WRSB208_65-75	Total/NA	Solid	Homogenization	
440-258875-13	WRSB208-FD_65-75	Total/NA	Solid	Homogenization	
440-258875-14	WRSB208_75-85	Total/NA	Solid	Homogenization	
440-258875-15	WRSB208_85-95	Total/NA	Solid	Homogenization	
440-258875-16	WRSB208_95-105	Total/NA	Solid	Homogenization	
440-258875-17	WRSB208_105-115	Total/NA	Solid	Homogenization	
440-258875-19	WRSB208_115-125	Total/NA	Solid	Homogenization	
440-258875-20	WRSB208_125-131.5	Total/NA	Solid	Homogenization	
440-258875-1 DU	WRSB208_0-0.5	Total/NA	Solid	Homogenization	

### Analysis Batch: 590269

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-258875-1	WRSB208_0-0.5	Total/NA	Solid	Moisture	
440-258875-2	WRSB208_0.5-3	Total/NA	Solid	Moisture	
440-258875-3	WRSB208_3-6	Total/NA	Solid	Moisture	

# QC Association Summary

Client: Wood E&I Solutions Inc

Job ID: 440-258875-1

Project/Site: ACMS - BP Yerington OU-4b\_OU-5 Soil

## General Chemistry (Continued)

### Analysis Batch: 590269 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-258875-4	WRSB208_6-15	Total/NA	Solid	Moisture	
440-258875-5	WRSB208_15-25	Total/NA	Solid	Moisture	
440-258875-6	WRSB208-FD_15-25	Total/NA	Solid	Moisture	
440-258875-7	WRSB208_25-35	Total/NA	Solid	Moisture	
440-258875-8	WRSB208_35-45	Total/NA	Solid	Moisture	
440-258875-9	WRSB208_45-55	Total/NA	Solid	Moisture	
440-258875-11	WRSB208_55-65	Total/NA	Solid	Moisture	
440-258875-12	WRSB208_65-75	Total/NA	Solid	Moisture	
440-258875-13	WRSB208-FD_65-75	Total/NA	Solid	Moisture	
440-258875-14	WRSB208_75-85	Total/NA	Solid	Moisture	
440-258875-15	WRSB208_85-95	Total/NA	Solid	Moisture	
440-258875-16	WRSB208_95-105	Total/NA	Solid	Moisture	
440-258875-17	WRSB208_105-115	Total/NA	Solid	Moisture	
440-258875-19	WRSB208_115-125	Total/NA	Solid	Moisture	
440-258875-20	WRSB208_125-131.5	Total/NA	Solid	Moisture	
440-258875-1 DU	WRSB208_0-0.5	Total/NA	Solid	Moisture	

# Lab Chronicle

Client: Wood E&I Solutions Inc

Project/Site: ACMS - BP Yerington OU-4b\_OU-5 Soil

Job ID: 440-258875-1

**Client Sample ID: WRSB208\_0-0.5**

**Lab Sample ID: 440-258875-1**

Matrix: Solid

Date Collected: 01/07/20 11:15

Date Received: 01/10/20 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Homogenization		1	590265	01/13/20 13:58	HTL	TAL IRV
Total/NA	Analysis	Moisture		1	590269	01/13/20 14:11	HTL	TAL IRV

**Client Sample ID: WRSB208\_0-0.5**

**Lab Sample ID: 440-258875-1**

Matrix: Solid

Percent Solids: 95.3

Date Collected: 01/07/20 11:15

Date Received: 01/10/20 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			590297	01/13/20 16:29	ST	TAL IRV
Total/NA	Analysis	6010B		5	590755	01/15/20 15:37	TQN	TAL IRV
Total/NA	Prep	3050B			590297	01/13/20 16:29	ST	TAL IRV
Total/NA	Analysis	6020		20	590542	01/14/20 15:41	B1H	TAL IRV
Total/NA	Prep	7471A			590447	01/17/20 08:41	MEM	TAL IRV
Total/NA	Analysis	7471A		1	591651	01/20/20 12:43	MEM	TAL IRV

**Client Sample ID: WRSB208\_0.5-3**

**Lab Sample ID: 440-258875-2**

Matrix: Solid

Date Collected: 01/07/20 11:25

Date Received: 01/10/20 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Homogenization		1	590265	01/13/20 13:58	HTL	TAL IRV
Total/NA	Analysis	Moisture		1	590269	01/13/20 14:11	HTL	TAL IRV

**Client Sample ID: WRSB208\_0.5-3**

**Lab Sample ID: 440-258875-2**

Matrix: Solid

Percent Solids: 96.0

Date Collected: 01/07/20 11:25

Date Received: 01/10/20 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			590297	01/13/20 16:29	ST	TAL IRV
Total/NA	Analysis	6010B		5	590755	01/15/20 16:14	TQN	TAL IRV
Total/NA	Prep	3050B			590297	01/13/20 16:29	ST	TAL IRV
Total/NA	Analysis	6020		20	590542	01/14/20 16:04	B1H	TAL IRV
Total/NA	Prep	7471A			590447	01/17/20 08:41	MEM	TAL IRV
Total/NA	Analysis	7471A		1	591651	01/20/20 12:51	MEM	TAL IRV

**Client Sample ID: WRSB208\_3-6**

**Lab Sample ID: 440-258875-3**

Matrix: Solid

Date Collected: 01/07/20 11:35

Date Received: 01/10/20 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Homogenization		1	590265	01/13/20 13:58	HTL	TAL IRV
Total/NA	Analysis	Moisture		1	590269	01/13/20 14:11	HTL	TAL IRV

# Lab Chronicle

Client: Wood E&I Solutions Inc

Project/Site: ACMS - BP Yerington OU-4b\_OU-5 Soil

Job ID: 440-258875-1

**Client Sample ID: WRSB208\_3-6**

**Lab Sample ID: 440-258875-3**

Date Collected: 01/07/20 11:35

Matrix: Solid

Date Received: 01/10/20 10:00

Percent Solids: 95.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			590297	01/13/20 16:29	ST	TAL IRV
Total/NA	Analysis	6010B		5	590755	01/15/20 16:17	TQN	TAL IRV
Total/NA	Prep	3050B			590297	01/13/20 16:29	ST	TAL IRV
Total/NA	Analysis	6020		20	590542	01/14/20 16:06	B1H	TAL IRV
Total/NA	Prep	7471A			590447	01/17/20 08:41	MEM	TAL IRV
Total/NA	Analysis	7471A		1	591651	01/20/20 12:54	MEM	TAL IRV

**Client Sample ID: WRSB208\_6-15**

**Lab Sample ID: 440-258875-4**

Date Collected: 01/07/20 11:42

Matrix: Solid

Date Received: 01/10/20 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Homogenization		1	590265	01/13/20 13:58	HTL	TAL IRV
Total/NA	Analysis	Moisture		1	590269	01/13/20 14:11	HTL	TAL IRV

**Client Sample ID: WRSB208\_6-15**

**Lab Sample ID: 440-258875-4**

Date Collected: 01/07/20 11:42

Matrix: Solid

Date Received: 01/10/20 10:00

Percent Solids: 95.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			590297	01/13/20 16:29	ST	TAL IRV
Total/NA	Analysis	6010B		5	590755	01/15/20 16:19	TQN	TAL IRV
Total/NA	Prep	3050B			590297	01/13/20 16:29	ST	TAL IRV
Total/NA	Analysis	6020		20	590542	01/14/20 16:08	B1H	TAL IRV
Total/NA	Prep	7471A			590447	01/17/20 08:41	MEM	TAL IRV
Total/NA	Analysis	7471A		1	591651	01/20/20 12:57	MEM	TAL IRV

**Client Sample ID: WRSB208\_15-25**

**Lab Sample ID: 440-258875-5**

Date Collected: 01/07/20 11:53

Matrix: Solid

Date Received: 01/10/20 10:00

Percent Solids: 95.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Homogenization		1	590265	01/13/20 13:58	HTL	TAL IRV
Total/NA	Analysis	Moisture		1	590269	01/13/20 14:11	HTL	TAL IRV

**Client Sample ID: WRSB208\_15-25**

**Lab Sample ID: 440-258875-5**

Date Collected: 01/07/20 11:53

Matrix: Solid

Date Received: 01/10/20 10:00

Percent Solids: 95.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			590297	01/13/20 16:29	ST	TAL IRV
Total/NA	Analysis	6010B		5	590755	01/15/20 16:21	TQN	TAL IRV
Total/NA	Prep	3050B			590297	01/13/20 16:29	ST	TAL IRV
Total/NA	Analysis	6020		20	590542	01/14/20 16:10	B1H	TAL IRV

# Lab Chronicle

Client: Wood E&I Solutions Inc

Project/Site: ACMS - BP Yerington OU-4b\_OU-5 Soil

Job ID: 440-258875-1

## **Client Sample ID: WRSB208\_15-25**

**Date Collected: 01/07/20 11:53**

**Date Received: 01/10/20 10:00**

## **Lab Sample ID: 440-258875-5**

**Matrix: Solid**

**Percent Solids: 95.8**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7471A			590447	01/17/20 08:41	MEM	TAL IRV
Total/NA	Analysis	7471A		1	591651	01/20/20 12:59	MEM	TAL IRV

## **Client Sample ID: WRSB208-FD\_15-25**

**Date Collected: 01/07/20 11:58**

**Date Received: 01/10/20 10:00**

## **Lab Sample ID: 440-258875-6**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Homogenization		1	590265	01/13/20 13:58	HTL	TAL IRV
Total/NA	Analysis	Moisture		1	590269	01/13/20 14:11	HTL	TAL IRV

## **Client Sample ID: WRSB208-FD\_15-25**

**Date Collected: 01/07/20 11:58**

**Date Received: 01/10/20 10:00**

## **Lab Sample ID: 440-258875-6**

**Matrix: Solid**

**Percent Solids: 96.0**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			590297	01/13/20 16:29	ST	TAL IRV
Total/NA	Analysis	6010B		5	590755	01/15/20 16:23	TQN	TAL IRV
Total/NA	Prep	3050B			590297	01/13/20 16:29	ST	TAL IRV
Total/NA	Analysis	6020		20	590542	01/14/20 16:12	B1H	TAL IRV
Total/NA	Prep	7471A			590447	01/17/20 08:41	MEM	TAL IRV
Total/NA	Analysis	7471A		1	591651	01/20/20 13:01	MEM	TAL IRV

## **Client Sample ID: WRSB208\_25-35**

**Date Collected: 01/07/20 12:10**

**Date Received: 01/10/20 10:00**

## **Lab Sample ID: 440-258875-7**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Homogenization		1	590265	01/13/20 13:58	HTL	TAL IRV
Total/NA	Analysis	Moisture		1	590269	01/13/20 14:11	HTL	TAL IRV

## **Client Sample ID: WRSB208\_25-35**

**Date Collected: 01/07/20 12:10**

**Date Received: 01/10/20 10:00**

## **Lab Sample ID: 440-258875-7**

**Matrix: Solid**

**Percent Solids: 96.4**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			590297	01/13/20 16:29	ST	TAL IRV
Total/NA	Analysis	6010B		5	590755	01/15/20 16:25	TQN	TAL IRV
Total/NA	Prep	3050B			590297	01/13/20 16:29	ST	TAL IRV
Total/NA	Analysis	6020		20	590542	01/14/20 16:14	B1H	TAL IRV
Total/NA	Prep	7471A			590447	01/17/20 08:41	MEM	TAL IRV
Total/NA	Analysis	7471A		1	591651	01/20/20 13:08	MEM	TAL IRV

# Lab Chronicle

Client: Wood E&I Solutions Inc

Project/Site: ACMS - BP Yerington OU-4b\_OU-5 Soil

Job ID: 440-258875-1

**Client Sample ID: WRSB208\_35-45**

**Lab Sample ID: 440-258875-8**

Matrix: Solid

Date Collected: 01/07/20 12:21

Date Received: 01/10/20 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Homogenization		1	590265	01/13/20 13:58	HTL	TAL IRV
Total/NA	Analysis	Moisture		1	590269	01/13/20 14:11	HTL	TAL IRV

**Client Sample ID: WRSB208\_35-45**

**Lab Sample ID: 440-258875-8**

Matrix: Solid

Percent Solids: 97.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			590297	01/13/20 16:29	ST	TAL IRV
Total/NA	Analysis	6010B		5	590755	01/15/20 16:28	TQN	TAL IRV
Total/NA	Prep	3050B			590297	01/13/20 16:29	ST	TAL IRV
Total/NA	Analysis	6020		20	590542	01/14/20 16:16	B1H	TAL IRV
Total/NA	Prep	7471A			590447	01/17/20 08:41	MEM	TAL IRV
Total/NA	Analysis	7471A		1	591651	01/20/20 13:11	MEM	TAL IRV

**Client Sample ID: WRSB208\_45-55**

**Lab Sample ID: 440-258875-9**

Matrix: Solid

Date Collected: 01/07/20 14:16

Date Received: 01/10/20 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Homogenization		1	590265	01/13/20 13:58	HTL	TAL IRV
Total/NA	Analysis	Moisture		1	590269	01/13/20 14:11	HTL	TAL IRV

**Client Sample ID: WRSB208\_45-55**

**Lab Sample ID: 440-258875-9**

Matrix: Solid

Percent Solids: 95.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			590297	01/13/20 16:29	ST	TAL IRV
Total/NA	Analysis	6010B		5	590755	01/15/20 16:47	TQN	TAL IRV
Total/NA	Prep	3050B			590297	01/13/20 16:29	ST	TAL IRV
Total/NA	Analysis	6020		20	590542	01/14/20 16:18	B1H	TAL IRV
Total/NA	Prep	7471A			590447	01/17/20 08:41	MEM	TAL IRV
Total/NA	Analysis	7471A		1	591651	01/20/20 13:13	MEM	TAL IRV

**Client Sample ID: WRSB208\_55-65**

**Lab Sample ID: 440-258875-11**

Matrix: Solid

Date Collected: 01/07/20 14:33

Date Received: 01/10/20 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Homogenization		1	590265	01/13/20 13:58	HTL	TAL IRV
Total/NA	Analysis	Moisture		1	590269	01/13/20 14:11	HTL	TAL IRV

# Lab Chronicle

Client: Wood E&I Solutions Inc

Project/Site: ACMS - BP Yerington OU-4b\_OU-5 Soil

Job ID: 440-258875-1

**Client Sample ID: WRSB208\_55-65**

Date Collected: 01/07/20 14:33

Date Received: 01/10/20 10:00

**Lab Sample ID: 440-258875-11**

Matrix: Solid

Percent Solids: 95.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			590297	01/13/20 16:29	ST	TAL IRV
Total/NA	Analysis	6010B		5	590755	01/15/20 16:49	TQN	TAL IRV
Total/NA	Prep	3050B			590297	01/13/20 16:29	ST	TAL IRV
Total/NA	Analysis	6020		20	590542	01/14/20 16:21	B1H	TAL IRV
Total/NA	Prep	7471A			590447	01/17/20 08:41	MEM	TAL IRV
Total/NA	Analysis	7471A		1	591651	01/20/20 13:15	MEM	TAL IRV

**Client Sample ID: WRSB208\_65-75**

Date Collected: 01/07/20 14:53

Date Received: 01/10/20 10:00

**Lab Sample ID: 440-258875-12**

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Homogenization		1	590265	01/13/20 13:58	HTL	TAL IRV
Total/NA	Analysis	Moisture		1	590269	01/13/20 14:11	HTL	TAL IRV

**Client Sample ID: WRSB208\_65-75**

Date Collected: 01/07/20 14:53

Date Received: 01/10/20 10:00

**Lab Sample ID: 440-258875-12**

Matrix: Solid

Percent Solids: 95.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			590297	01/13/20 16:29	ST	TAL IRV
Total/NA	Analysis	6010B		5	590755	01/15/20 16:52	TQN	TAL IRV
Total/NA	Prep	3050B			590297	01/13/20 16:29	ST	TAL IRV
Total/NA	Analysis	6020		20	590542	01/14/20 16:23	B1H	TAL IRV
Total/NA	Prep	7471A			590447	01/17/20 08:41	MEM	TAL IRV
Total/NA	Analysis	7471A		1	591651	01/20/20 13:17	MEM	TAL IRV

**Client Sample ID: WRSB208-FD\_65-75**

**Lab Sample ID: 440-258875-13**

Matrix: Solid

Date Received: 01/10/20 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Homogenization		1	590265	01/13/20 13:58	HTL	TAL IRV
Total/NA	Analysis	Moisture		1	590269	01/13/20 14:11	HTL	TAL IRV

**Client Sample ID: WRSB208-FD\_65-75**

**Lab Sample ID: 440-258875-13**

Matrix: Solid

Percent Solids: 95.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			590297	01/13/20 16:29	ST	TAL IRV
Total/NA	Analysis	6010B		5	590755	01/15/20 16:54	TQN	TAL IRV
Total/NA	Prep	3050B			590297	01/13/20 16:29	ST	TAL IRV
Total/NA	Analysis	6020		20	590542	01/14/20 16:42	B1H	TAL IRV

# Lab Chronicle

Client: Wood E&I Solutions Inc

Project/Site: ACMS - BP Yerington OU-4b\_OU-5 Soil

Job ID: 440-258875-1

**Client Sample ID: WRSB208-FD\_65-75**

Date Collected: 01/07/20 15:03

Date Received: 01/10/20 10:00

**Lab Sample ID: 440-258875-13**

Matrix: Solid

Percent Solids: 95.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7471A			590447	01/17/20 08:41	MEM	TAL IRV
Total/NA	Analysis	7471A		1	591651	01/20/20 13:19	MEM	TAL IRV

**Client Sample ID: WRSB208\_75-85**

Date Collected: 01/07/20 15:17

Date Received: 01/10/20 10:00

**Lab Sample ID: 440-258875-14**

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Homogenization		1	590265	01/13/20 13:58	HTL	TAL IRV
Total/NA	Analysis	Moisture		1	590269	01/13/20 14:11	HTL	TAL IRV

**Client Sample ID: WRSB208\_75-85**

Date Collected: 01/07/20 15:17

Date Received: 01/10/20 10:00

**Lab Sample ID: 440-258875-14**

Matrix: Solid

Percent Solids: 94.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			590297	01/13/20 16:29	ST	TAL IRV
Total/NA	Analysis	6010B		5	590755	01/15/20 16:56	TQN	TAL IRV
Total/NA	Prep	3050B			590297	01/13/20 16:29	ST	TAL IRV
Total/NA	Analysis	6020		20	590542	01/14/20 16:45	B1H	TAL IRV
Total/NA	Prep	7471A			590447	01/17/20 08:41	MEM	TAL IRV
Total/NA	Analysis	7471A		1	591651	01/20/20 13:22	MEM	TAL IRV

**Client Sample ID: WRSB208\_85-95**

Date Collected: 01/07/20 15:50

Date Received: 01/10/20 10:00

**Lab Sample ID: 440-258875-15**

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Homogenization		1	590265	01/13/20 13:58	HTL	TAL IRV
Total/NA	Analysis	Moisture		1	590269	01/13/20 14:11	HTL	TAL IRV

**Client Sample ID: WRSB208\_85-95**

Date Collected: 01/07/20 15:50

Date Received: 01/10/20 10:00

**Lab Sample ID: 440-258875-15**

Matrix: Solid

Percent Solids: 94.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			590297	01/13/20 16:29	ST	TAL IRV
Total/NA	Analysis	6010B		5	590755	01/15/20 16:58	TQN	TAL IRV
Total/NA	Prep	3050B			590297	01/13/20 16:29	ST	TAL IRV
Total/NA	Analysis	6020		20	590542	01/14/20 16:47	B1H	TAL IRV
Total/NA	Prep	7471A			590447	01/17/20 08:41	MEM	TAL IRV
Total/NA	Analysis	7471A		1	591651	01/20/20 13:24	MEM	TAL IRV

# Lab Chronicle

Client: Wood E&I Solutions Inc

Project/Site: ACMS - BP Yerington OU-4b\_OU-5 Soil

Job ID: 440-258875-1

**Client Sample ID: WRSB208\_95-105**

Date Collected: 01/08/20 12:06

Date Received: 01/10/20 10:00

**Lab Sample ID: 440-258875-16**

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Homogenization		1	590265	01/13/20 13:58	HTL	TAL IRV
Total/NA	Analysis	Moisture		1	590269	01/13/20 14:11	HTL	TAL IRV

**Client Sample ID: WRSB208\_95-105**

Date Collected: 01/08/20 12:06

Date Received: 01/10/20 10:00

**Lab Sample ID: 440-258875-16**

Matrix: Solid

Percent Solids: 94.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			590297	01/13/20 16:29	ST	TAL IRV
Total/NA	Analysis	6010B		5	590755	01/15/20 17:00	TQN	TAL IRV
Total/NA	Prep	3050B			590297	01/13/20 16:29	ST	TAL IRV
Total/NA	Analysis	6020		20	590542	01/14/20 16:49	B1H	TAL IRV
Total/NA	Prep	7471A			590447	01/17/20 08:41	MEM	TAL IRV
Total/NA	Analysis	7471A		1	591651	01/20/20 13:26	MEM	TAL IRV

**Client Sample ID: WRSB208\_105-115**

Date Collected: 01/08/20 12:23

Date Received: 01/10/20 10:00

**Lab Sample ID: 440-258875-17**

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Homogenization		1	590265	01/13/20 13:58	HTL	TAL IRV
Total/NA	Analysis	Moisture		1	590269	01/13/20 14:11	HTL	TAL IRV

**Client Sample ID: WRSB208\_105-115**

Date Collected: 01/08/20 12:23

Date Received: 01/10/20 10:00

**Lab Sample ID: 440-258875-17**

Matrix: Solid

Percent Solids: 94.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			590297	01/13/20 16:29	ST	TAL IRV
Total/NA	Analysis	6010B		5	590755	01/15/20 17:03	TQN	TAL IRV
Total/NA	Prep	3050B			590297	01/13/20 16:29	ST	TAL IRV
Total/NA	Analysis	6020		20	590542	01/14/20 16:51	B1H	TAL IRV
Total/NA	Prep	7471A			590447	01/17/20 08:41	MEM	TAL IRV
Total/NA	Analysis	7471A		1	591651	01/20/20 13:28	MEM	TAL IRV

**Client Sample ID: WRSB208\_115-125**

Date Collected: 01/08/20 12:42

Date Received: 01/10/20 10:00

**Lab Sample ID: 440-258875-19**

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Homogenization		1	590265	01/13/20 13:58	HTL	TAL IRV
Total/NA	Analysis	Moisture		1	590269	01/13/20 14:11	HTL	TAL IRV

# Lab Chronicle

Client: Wood E&I Solutions Inc

Project/Site: ACMS - BP Yerington OU-4b\_OU-5 Soil

Job ID: 440-258875-1

**Client Sample ID: WRSB208\_115-125**

**Date Collected: 01/08/20 12:42**

**Date Received: 01/10/20 10:00**

**Lab Sample ID: 440-258875-19**

**Matrix: Solid**

**Percent Solids: 95.5**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			590297	01/13/20 16:29	ST	TAL IRV
Total/NA	Analysis	6010B		5	590755	01/15/20 17:05	TQN	TAL IRV
Total/NA	Prep	3050B			590297	01/13/20 16:29	ST	TAL IRV
Total/NA	Analysis	6020		20	590542	01/14/20 16:53	B1H	TAL IRV
Total/NA	Prep	7471A			590447	01/17/20 08:41	MEM	TAL IRV
Total/NA	Analysis	7471A		1	591651	01/20/20 13:35	MEM	TAL IRV

**Client Sample ID: WRSB208\_125-131.5**

**Date Collected: 01/08/20 15:57**

**Date Received: 01/10/20 10:00**

**Lab Sample ID: 440-258875-20**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Homogenization		1	590265	01/13/20 13:58	HTL	TAL IRV
Total/NA	Analysis	Moisture		1	590269	01/13/20 14:11	HTL	TAL IRV

**Client Sample ID: WRSB208\_125-131.5**

**Date Collected: 01/08/20 15:57**

**Date Received: 01/10/20 10:00**

**Lab Sample ID: 440-258875-20**

**Matrix: Solid**

**Percent Solids: 96.4**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			590297	01/13/20 16:29	ST	TAL IRV
Total/NA	Analysis	6010B		5	590755	01/15/20 17:07	TQN	TAL IRV
Total/NA	Prep	3050B			590297	01/13/20 16:29	ST	TAL IRV
Total/NA	Analysis	6020		20	590542	01/14/20 16:55	B1H	TAL IRV
Total/NA	Prep	7471A			590447	01/17/20 08:41	MEM	TAL IRV
Total/NA	Analysis	7471A		1	591651	01/20/20 13:37	MEM	TAL IRV

## Laboratory References:

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

# Accreditation/Certification Summary

Client: Wood E&I Solutions Inc

Project/Site: ACMS - BP Yerington OU-4b\_OU-5 Soil

Job ID: 440-258875-1

## Laboratory: Eurofins Calscience Irvine

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Nevada	State Program	CA015312020-6	07-31-20

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture

# Method Summary

Client: Wood E&I Solutions Inc

Project/Site: ACMS - BP Yerington OU-4b\_OU-5 Soil

Job ID: 440-258875-1

Method	Method Description	Protocol	Laboratory
6010B	Metals (ICP)	SW846	TAL IRV
6020	Metals (ICP/MS)	SW846	TAL IRV
7471A	Mercury (CVAA)	SW846	TAL IRV
Homogenization	Homogenization	None	TAL IRV
Moisture	Percent Moisture	EPA	TAL IRV
3050B	Preparation, Metals	SW846	TAL IRV
7471A	Preparation, Mercury	SW846	TAL IRV

## Protocol References:

EPA = US Environmental Protection Agency

None = None

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

## Laboratory References:

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

# Sample Summary

Client: Wood E&I Solutions Inc

Project/Site: ACMS - BP Yerington OU-4b\_OU-5 Soil

Job ID: 440-258875-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
440-258875-1	WRSB208_0-0.5	Solid	01/07/20 11:15	01/10/20 10:00	
440-258875-2	WRSB208_0.5-3	Solid	01/07/20 11:25	01/10/20 10:00	
440-258875-3	WRSB208_3-6	Solid	01/07/20 11:35	01/10/20 10:00	
440-258875-4	WRSB208_6-15	Solid	01/07/20 11:42	01/10/20 10:00	
440-258875-5	WRSB208_15-25	Solid	01/07/20 11:53	01/10/20 10:00	
440-258875-6	WRSB208-FD_15-25	Solid	01/07/20 11:58	01/10/20 10:00	
440-258875-7	WRSB208_25-35	Solid	01/07/20 12:10	01/10/20 10:00	
440-258875-8	WRSB208_35-45	Solid	01/07/20 12:21	01/10/20 10:00	
440-258875-9	WRSB208_45-55	Solid	01/07/20 14:16	01/10/20 10:00	
440-258875-11	WRSB208_55-65	Solid	01/07/20 14:33	01/10/20 10:00	
440-258875-12	WRSB208_65-75	Solid	01/07/20 14:53	01/10/20 10:00	
440-258875-13	WRSB208-FD_65-75	Solid	01/07/20 15:03	01/10/20 10:00	
440-258875-14	WRSB208_75-85	Solid	01/07/20 15:17	01/10/20 10:00	
440-258875-15	WRSB208_85-95	Solid	01/07/20 15:50	01/10/20 10:00	
440-258875-16	WRSB208_95-105	Solid	01/08/20 12:06	01/10/20 10:00	
440-258875-17	WRSB208_105-115	Solid	01/08/20 12:23	01/10/20 10:00	
440-258875-19	WRSB208_115-125	Solid	01/08/20 12:42	01/10/20 10:00	
440-258875-20	WRSB208_125-131.5	Solid	01/08/20 15:57	01/10/20 10:00	

## REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
<b>ICP STD A_00003</b>	04/01/21		CPI, Lot 10099542-5		(Purchased Reagent)		Aluminum	200 mg/L
							Arsenic	200 mg/L
							Barium	200 mg/L
							Beryllium	200 mg/L
							Boron	200 mg/L
							Cadmium	200 mg/L
							Calcium	1000 mg/L
							Chromium	200 mg/L
							Cobalt	200 mg/L
							Copper	200 mg/L
							Iron	200 mg/L
							Lead	200 mg/L
							Lithium	200 mg/L
							Magnesium	1000 mg/L
							Manganese	200 mg/L
							Nickel	200 mg/L
							Phosphorus	200 mg/L
							Potassium	2000 mg/L
							Selenium	200 mg/L
							Silver	100 mg/L
							Sodium	2000 mg/L
							Strontium	200 mg/L
							Thallium	200 mg/L
							Vanadium	200 mg/L
							Zinc	200 mg/L
<b>ICP STD B_00003</b>	10/16/20		CPI, Lot 10099542-6		(Purchased Reagent)		Antimony	200 mg/L
							Molybdenum	200 mg/L
							Si	1000 mg/L
							SiO2	2150 mg/L
							Tin	200 mg/L
							Titanium	200 mg/L
							W	200 mg/L
							Zr	200 mg/L
<b>ICV SODIUM_00099</b>	01/16/20	01/15/20	1%HNO3/2%HCl, Lot 752887-20	50 mL	ICPMMS STD NA_00001	0.025 mL	Sodium	5 mg/L
.ICPMMS STD NA_00001	04/22/20		CPI International, Lot 752887-20		(Purchased Reagent)		Sodium	10000 ug/mL
<b>ME 1 PPM HG1_00416</b>	01/20/20	01/13/20	0.15% HNO3, Lot 0000216908	50 mL	ME 0.15% HNO3_00027	45 mL	Stock Chemical	13.5 mg/L
.ME 0.15% HNO3_00027	07/08/20	07/08/19	Di Water, Lot N/A	1 L	ME 10PPM 00013	5 mL	Mercury	1 mg/L
.ME HNO3_00492	05/23/23		Macron Fine Chemicals, Lot 0000216908		ME HNO3_00492	1.5 mL	Stock Chemical	15 mg/L
.ME 10PPM_00013	01/01/21		CPI, Lot 991303-38		(Purchased Reagent)		Stock Chemical	1 %
					(Purchased Reagent)		Mercury	10 mg/L
<b>ME 1 PPM HG1_00418</b>	01/27/20	01/20/20	0.15% HNO3, Lot 0000216908	50 mL	ME 0.15% HNO3_00027	45 mL	Stock Chemical	13.5 mg/L
.ME 0.15% HNO3_00027	07/08/20	07/08/19	Di Water, Lot N/A	1 L	ME 10PPM 00013	5 mL	Mercury	1 mg/L
					ME HNO3_00492	1.5 mL	Stock Chemical	15 mg/L

## REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.ME HNO3_00492	05/23/23	Macron Fine Chemicals, Lot 0000216908		(Purchased Reagent)		Stock Chemical	1 %	
.ME 10PPM 00013	01/01/21	CPI, Lot 991303-38		(Purchased Reagent)		Mercury	10 mg/L	
<b>ME 1 PPM HG1_00419</b>	01/27/20	01/20/20	0.15% HNO3, Lot 0000216908	50 mL	ME 0.15% HNO3_00027	45 mL	Stock Chemical	13.5 mg/L
					ME 10PPM HG2_00018	5 mL		
.ME 0.15% HNO3_00027	07/08/20	07/08/19	Di Water, Lot N/A	1 L	ME HNO3_00492	1.5 mL	Stock Chemical	15 mg/L
.ME HNO3_00492	05/23/23	Macron Fine Chemicals, Lot 0000216908		(Purchased Reagent)		Stock Chemical	1 %	
.ME 10PPM HG2_00018	07/30/20	Spex, Lot 24-68HGY		(Purchased Reagent)		Mercury	10 mg/L	
<b>ME 1:1 HNO3_00292</b>	12/18/20	12/18/19	Di Water, Lot N/A	2000 mL	ME HNO3_00550	2000 mL	Stock Chemical	1 %
.ME HNO3_00550	12/20/23	Macron, Lot 0000221803		(Purchased Reagent)		Stock Chemical	1 %	
<b>ME 30% H2O2_00110</b>	12/21/20	Fisher, Lot 194486		(Purchased Reagent)		Stock Chemical	30 %	
<b>ME Aqua Regia_00791</b>	01/18/20	01/17/20	Di Water, Lot n/a	400 mL	ME HCl_00557	300 mL	Stock Chemical	75.25 %
					ME HNO3_00551	100 mL		
.ME HCl_00557	09/15/24	JT Baker, Lot 0000243992		(Purchased Reagent)		Stock Chemical	100 %	
.ME HNO3_00551	12/20/23	Macron Fine Chemicals, Lot 0000221803		(Purchased Reagent)		Stock Chemical	1 %	
<b>ME Aqua Regia_00792</b>	01/21/20	01/20/20	Di Water, Lot n/a	400 mL	ME HCl_00557	300 mL	Stock Chemical	75.25 %
					ME HNO3_00551	100 mL		
.ME HCl_00557	09/15/24	JT Baker, Lot 0000243992		(Purchased Reagent)		Stock Chemical	100 %	
.ME HNO3_00551	12/20/23	Macron Fine Chemicals, Lot 0000221803		(Purchased Reagent)		Stock Chemical	1 %	
<b>ME HCl_00551</b>	09/15/24	JT Baker, Lot 0000243992		(Purchased Reagent)		Stock Chemical	100 %	
<b>ME HNO3_00548</b>	12/20/23	Macron, Lot 0000221803		(Purchased Reagent)		Stock Chemical	1 %	
<b>ME HYDROX SOL_00117</b>	07/10/20	01/10/20	Di Water, Lot n/a	3 L	ME H8N2O6S_00075	360 g	Stock Chemical	24 %
					ME NaCl_00031	360 g		
.ME H8N2O6S_00075	01/03/21	fisher, Lot 189407		(Purchased Reagent)		Stock Chemical	100 %	
.ME NaCl_00031	01/03/21	Fisher Scientific, Lot 190446		(Purchased Reagent)		Stock Chemical	100 %	
<b>ME ICP ICV2_02382</b>	01/16/20	01/15/20	1%HNO3/2%HCl, Lot N/A	100 mL	Boron_00001	0.1 mL	Boron	1 mg/L
					Spike Mix 1_00010	1 mL		
					SPIKE MIX 2_00001	0.1 mL	Lithium	1 mg/L
					SPIKE MIX 3_00001	0.1 mL		
.Boron_00001	09/28/20	CPI, Lot 982524-31		(Purchased Reagent)		Boron	1000 mg/L	
.Spike Mix 1_00010	03/12/21	CPI, Lot 1021235-1		(Purchased Reagent)		Lithium	100 mg/L	
<b>.SPIKE MIX 2_00001</b>	09/28/20	CPI, Lot 992745-2		(Purchased Reagent)		Strontium	100 mg/L	
						Tin	200 mg/L	
						Titanium	100 mg/L	
						Aluminum		
						Calcium	5000 mg/L	
						Iron		
						Magnesium	1000 mg/L	
						Potassium		
						Phosphorus	5000 mg/L	
						Boron		

## REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.SPIKE MIX 3_00001	09/28/20		CPI, Lot 992746-1		(Purchased Reagent)		Potassium	5000 mg/L
							Phosphorus	2000 mg/L
ME ICP IFA_02380	01/16/20	01/15/20	1%HNO3/2%HCl, Lot NA	50 mL	Aluminum_00001	3 mL	Aluminum	600 mg/L
					Calcium_00008	3 mL	Calcium	600 mg/L
					Iron_00001	3 mL	Iron	600 mg/L
					Maganesium_00001	3 mL	Magnesium	600 mg/L
.Aluminum_00001	10/04/20		CPI, Lot 169484-20		(Purchased Reagent)		Aluminum	10000 mg/L
.Calcium_00008	10/04/20		CPI, Lot 147497-100		(Purchased Reagent)		Calcium	10000 mg/L
.Iron_00001	10/04/20		CPI, Lot 156651-59		(Purchased Reagent)		Iron	10000 mg/L
.Maganesium_00001	10/04/20		CPI, Lot 148250-105		(Purchased Reagent)		Magnesium	10000 mg/L
ME ICP IFB_02401	01/16/20	01/15/20	1%HNO3/2%HCl, Lot NA	50 mL	Aluminum_00001	3 mL	Aluminum	600.5 mg/L
					Calcium_00008	3 mL	Calcium	602.5 mg/L
					ICP STD A_00002	0.125 mL	Aluminum	600.5 mg/L
							Arsenic	0.5 mg/L
							Barium	0.5 mg/L
							Beryllium	0.5 mg/L
							Boron	0.5 mg/L
							Cadmium	0.5 mg/L
							Calcium	602.5 mg/L
							Chromium	0.5 mg/L
							Cobalt	0.5 mg/L
							Copper	0.5 mg/L
							Iron	600.5 mg/L
							Lead	0.5 mg/L
							Lithium	0.5 mg/L
							Magnesium	602.5 mg/L
							Manganese	0.5 mg/L
							Nickel	0.5 mg/L
							Phosphorus	0.5 mg/L
							Potassium	5 mg/L
							Selenium	0.5 mg/L
							Silver	0.25 mg/L
							Sodium	5 mg/L
							Strontium	0.5 mg/L
							Thallium	0.5 mg/L
							Vanadium	0.5 mg/L
							Zinc	0.5 mg/L
					ICP STD B_00002	0.125 mL	Antimony	0.5 mg/L
							Molybdenum	0.5 mg/L
							Si	2.5 mg/L
							Tin	0.5 mg/L
							Titanium	0.5 mg/L
							W	0.5 mg/L
							Zr	0.5 mg/L
					Iron_00001	3 mL	Iron	600.5 mg/L
					Maganesium_00001	3 mL	Magnesium	602.5 mg/L
.Aluminum_00001	10/04/20		CPI, Lot 169484-20		(Purchased Reagent)		Aluminum	10000 mg/L

## REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration	
					Reagent ID	Volume Added			
.Calcium_00008	10/04/20		CPI, Lot 147497-100		(Purchased Reagent)		Calcium	10000 mg/L	
.ICP STD A_00002	03/18/21		CPI, Lot 10099542-4		(Purchased Reagent)		Aluminum	200 mg/L	
							Arsenic	200 mg/L	
							Barium	200 mg/L	
							Beryllium	200 mg/L	
							Boron	200 mg/L	
							Cadmium	200 mg/L	
							Calcium	1000 mg/L	
							Chromium	200 mg/L	
							Cobalt	200 mg/L	
							Copper	200 mg/L	
							Iron	200 mg/L	
							Lead	200 mg/L	
							Lithium	200 mg/L	
							Magnesium	1000 mg/L	
							Manganese	200 mg/L	
							Nickel	200 mg/L	
							Phosphorus	200 mg/L	
							Potassium	2000 mg/L	
							Selenium	200 mg/L	
							Silver	100 mg/L	
							Sodium	2000 mg/L	
							Strontium	200 mg/L	
							Thallium	200 mg/L	
							Vanadium	200 mg/L	
							Zinc	200 mg/L	
.ICP STD B_00002	02/28/21		CPI, Lot 10099542-3		(Purchased Reagent)		Antimony	200 mg/L	
							Molybdenum	200 mg/L	
							Si	1000 mg/L	
							Tin	200 mg/L	
							Titanium	200 mg/L	
							W	200 mg/L	
							Zr	200 mg/L	
.Iron_00001	10/04/20		CPI, Lot 156651-59		(Purchased Reagent)		Iron	10000 mg/L	
.Magnesium_00001	10/04/20		CPI, Lot 148250-105		(Purchased Reagent)		Magnesium	10000 mg/L	
ME ICP PREP S_00028	01/17/20	12/17/19	1% HNO <sub>3</sub> , Lot N/A	50 mL	ICP STD A_00002	25 mL	Aluminum	100 mg/L	
							Boron	100 mg/L	
							Calcium	500 mg/L	
							Iron	100 mg/L	
							Lithium	100 mg/L	
							Magnesium	500 mg/L	
							Phosphorus	100 mg/L	
							Potassium	1000 mg/L	
							Sodium	1000 mg/L	
							Strontium	100 mg/L	
.ICP STD A_00002	03/18/21		CPI, Lot 10099542-4		(Purchased Reagent)		Aluminum	200 mg/L	
							Boron	200 mg/L	

## REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Calcium	1000 mg/L
							Iron	200 mg/L
							Lithium	200 mg/L
							Magnesium	1000 mg/L
							Phosphorus	200 mg/L
							Potassium	2000 mg/L
							Sodium	2000 mg/L
							Strontium	200 mg/L
<b>ME ICP PREP S_00029</b>	01/17/20	12/17/19	1% HNO3, Lot N/A	50 mL	ICP STD B_00003	25 mL	Tin	100 mg/L
<b>.ICP STD B_00003</b>	10/16/20		CPI, Lot 10099542-6		(Purchased Reagent)		Titanium	100 mg/L
<b>ME ICP RL_01153</b>	01/16/20	01/15/20	1%HNO3/2%HCl, Lot 211065110	100 mL	ME ICP STD3_03094	2 mL	Aluminum	0.2 ug/mL
							Boron	0.1 ug/mL
							Calcium	0.2 ug/mL
							Iron	0.2 ug/mL
							Lithium	0.1 ug/mL
							Magnesium	0.04 ug/mL
							Phosphorus	0.4 ug/mL
							Potassium	1 ug/mL
							Sodium	1 ug/mL
							Strontium	0.04 ug/mL
							Tin	0.2 ug/mL
							Titanium	0.01 ug/mL
<b>.ME ICP STD3_03094</b>	01/16/20	01/15/20	1%HNO3/2%HCL, Lot 211065110	100 mL	Custom mix A_00001	1 mL	Aluminum	10 ug/mL
							Boron	5 ug/mL
							Calcium	10 ug/mL
							Iron	10 ug/mL
							Lithium	5 ug/mL
							Magnesium	2 ug/mL
							Phosphorus	20 ug/mL
							Potassium	50 ug/mL
							Sodium	50 ug/mL
							Strontium	2 ug/mL
					Custom mix B_00001	1 mL	Tin	10 ug/mL
							Titanium	0.5 ug/mL
<b>..Custom mix A_00001</b>	10/26/20		INORGANIC VENTURES, Lot M2-MEB662656		(Purchased Reagent)		Aluminum	1000 mg/L
							Boron	500 mg/L
							Calcium	1000 mg/L
							Iron	1000 mg/L
							Lithium	500 mg/L
							Magnesium	200 mg/L
							Phosphorus	2000 mg/L
							Potassium	5000 mg/L
							Sodium	5000 mg/L

## REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..Custom mix B_00001	10/26/20		INORGANIC VENTURES, Lot M2-MEB662657		(Purchased Reagent)		Strontium	200 mg/L
					Tin		Titanium	1000 mg/L
								50 mg/L
ME ICP STD3_03095	01/16/20	01/15/20	1%HNO3/2%HCL, Lot 211065110	100 mL	ICP STD A_00002	0.5 mL	Aluminum	1 ug/mL
					Boron		Boron	1 ug/mL
					Calcium		Calcium	5 ug/mL
					Iron		Iron	1 ug/mL
					Lithium		Lithium	1 ug/mL
					Magnesium		Magnesium	5 ug/mL
					Phosphorus		Phosphorus	1 ug/mL
					Potassium		Potassium	10 ug/mL
					Sodium		Sodium	10 ug/mL
					Strontium		Strontium	1 ug/mL
					ICP STD B_00002	0.5 mL	Tin	1 ug/mL
							Titanium	1 ug/mL
.ICP STD A_00002	03/18/21		CPI, Lot 10099542-4		(Purchased Reagent)		Aluminum	200 mg/L
					Boron		Boron	200 mg/L
					Calcium		Calcium	1000 mg/L
					Iron		Iron	200 mg/L
					Lithium		Lithium	200 mg/L
					Magnesium		Magnesium	1000 mg/L
					Phosphorus		Phosphorus	200 mg/L
					Potassium		Potassium	2000 mg/L
					Sodium		Sodium	2000 mg/L
					Strontium		Strontium	200 mg/L
.ICP STD B_00002	02/28/21		CPI, Lot 10099542-3		(Purchased Reagent)		Tin	200 mg/L
							Titanium	200 mg/L
ME ICPMS CAL_00054	04/21/20	11/12/19	1% HNO3, Lot 5158118	500 mL	ICPMS STD AG 00002	5 mL	Silver	10 mg/L
					ICPMS STD ZN 00001	5 mL	Zinc	10 mg/L
					ME ICPMS CAL_00052	50 mL	Antimony	10 mg/L
							Arsenic	10 mg/L
							Barium	10 mg/L
							Beryllium	10 mg/L
							Cadmium	10 mg/L
							Chromium	10 mg/L
							Cobalt	10 mg/L
							Copper	10 mg/L
							Lead	10 mg/L
							Manganese	10 mg/L
							Molybdenum	10 mg/L
							Nickel	10 mg/L
							Selenium	10 mg/L
							Thallium	10 mg/L
							Vanadium	10 mg/L
.ICPMS STD AG 00002	10/04/20		CPI International, Lot 975475-22		(Purchased Reagent)		Silver	1000 ug/mL
.ICPMS STD ZN 00001	04/22/20		CPI International, Lot 166918-115		(Purchased Reagent)		Zinc	1000 ug/mL

## REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.ME ICPMS CAL_00052	09/18/21	CPI International, Lot 1018875-2			(Purchased Reagent)		Antimony	100 mg/L
							Arsenic	100 mg/L
							Barium	100 mg/L
							Beryllium	100 mg/L
							Cadmium	100 mg/L
							Chromium	100 mg/L
							Cobalt	100 mg/L
							Copper	100 mg/L
							Lead	100 mg/L
							Manganese	100 mg/L
							Molybdenum	100 mg/L
							Nickel	100 mg/L
							Selenium	100 mg/L
							Thallium	100 mg/L
							Vanadium	100 mg/L
ME KMNO4_00189	04/10/20	01/10/20	Di Water, Lot n/a	6 L	ME KMNO4_00049	300 g	Stock Chemical	5 %
.ME KMNO4_00049	12/21/20	Fisher, Lot 180124			(Purchased Reagent)		Stock Chemical	100 %
ME ICPMS CCV_00321	04/21/20	01/14/20	1%HNO3/0.5%HCl, Lot N/A	250 mL	ME ICPMS CAL_00054	1.25 mL	Silver	50 ug/L
							Zinc	50 ug/L
							Antimony	50 ug/L
							Arsenic	50 ug/L
							Barium	50 ug/L
							Beryllium	50 ug/L
							Cadmium	50 ug/L
							Chromium	50 ug/L
							Cobalt	50 ug/L
							Copper	50 ug/L
							Lead	50 ug/L
							Manganese	50 ug/L
							Molybdenum	50 ug/L
							Nickel	50 ug/L
							Selenium	50 ug/L
							Thallium	50 ug/L
							Vanadium	50 ug/L
.ME ICPMS CAL_00054	04/21/20	11/12/19	1% HNO3, Lot 5158118	500 mL	ICPMS STD AG_00002	5 mL	Silver	10 mg/L
					ICPMS STD ZN_00001	5 mL	Zinc	10 mg/L
					ME ICPMS CAL_00052	50 mL	Antimony	10 mg/L
							Arsenic	10 mg/L
							Barium	10 mg/L
							Beryllium	10 mg/L
							Cadmium	10 mg/L
							Chromium	10 mg/L
							Cobalt	10 mg/L
							Copper	10 mg/L
							Lead	10 mg/L
							Manganese	10 mg/L
							Molybdenum	10 mg/L

## REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Nickel	10 mg/L
							Selenium	10 mg/L
							Thallium	10 mg/L
							Vanadium	10 mg/L
..ICPMS STD AG 00002	10/04/20	CPI International, Lot 975475-22			(Purchased Reagent)		Silver	1000 ug/mL
..ICPMS STD ZN 00001	04/22/20	CPI International, Lot 166918-115			(Purchased Reagent)		Zinc	1000 ug/mL
..ME ICPMS CAL_00052	09/18/21	CPI International, Lot 1018875-2			(Purchased Reagent)		Antimony	100 mg/L
							Arsenic	100 mg/L
							Barium	100 mg/L
							Beryllium	100 mg/L
							Cadmium	100 mg/L
							Chromium	100 mg/L
							Cobalt	100 mg/L
							Copper	100 mg/L
							Lead	100 mg/L
							Manganese	100 mg/L
							Molybdenum	100 mg/L
							Nickel	100 mg/L
							Selenium	100 mg/L
							Thallium	100 mg/L
							Vanadium	100 mg/L
MEICPMS CRI1_00326	06/04/21	01/14/20	1%HNO3/0.5%HCl, Lot N/A	100 mL	ME_CRI_30_00017	0.1 mL	Antimony	1 ug/mL
							Arsenic	1 ug/mL
							Barium	1 ug/mL
							Beryllium	0.5 ug/mL
							Cadmium	1 ug/mL
							Chromium	1 ug/mL
							Cobalt	1 ug/mL
							Copper	1 ug/mL
							Lead	1 ug/mL
							Manganese	1 ug/mL
							Molybdenum	1 ug/mL
							Nickel	1 ug/mL
							Selenium	1 ug/mL
							Silver	1 ug/mL
							Thallium	1 ug/mL
							Vanadium	1 ug/mL
							Zinc	10 ug/mL
.ME_CRI_30_00017	06/04/21	CPI International, Lot 10106962-1			(Purchased Reagent)		Antimony	1 ug/mL
							Arsenic	1 ug/mL
							Barium	1 ug/mL
							Beryllium	0.5 ug/mL
							Cadmium	1 ug/mL
							Chromium	1 ug/mL
							Cobalt	1 ug/mL
							Copper	1 ug/mL
							Lead	1 ug/mL

## REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Manganese	1 ug/mL
							Molybdenum	1 ug/mL
							Nickel	1 ug/mL
							Selenium	1 ug/mL
							Silver	1 ug/mL
							Thallium	1 ug/mL
							Vanadium	1 ug/mL
							Zinc	10 ug/mL
MEICPMS CRI2_00324	06/04/21	01/14/20	1%HNO3/0.5%HCl, Lot N/A	100 mL	ME_CRI_30_00017	0.2 mL	Antimony	2 ug/L
							Arsenic	2 ug/L
							Barium	2 ug/L
							Beryllium	1 ug/L
							Cadmium	2 ug/L
							Chromium	2 ug/L
							Cobalt	2 ug/L
							Copper	2 ug/L
							Lead	2 ug/L
							Manganese	2 ug/L
							Molybdenum	2 ug/L
							Nickel	2 ug/L
							Selenium	2 ug/L
							Silver	2 ug/L
							Thallium	2 ug/L
							Vanadium	2 ug/L
							Zinc	20 ug/L
.ME_CRI_30_00017	06/04/21	CPI International, Lot 10106962-1			(Purchased Reagent)		Antimony	1 ug/mL
							Arsenic	1 ug/mL
							Barium	1 ug/mL
							Beryllium	0.5 ug/mL
							Cadmium	1 ug/mL
							Chromium	1 ug/mL
							Cobalt	1 ug/mL
							Copper	1 ug/mL
							Lead	1 ug/mL
							Manganese	1 ug/mL
							Molybdenum	1 ug/mL
							Nickel	1 ug/mL
							Selenium	1 ug/mL
							Silver	1 ug/mL
							Thallium	1 ug/mL
							Vanadium	1 ug/mL
							Zinc	10 ug/mL
MEICPMS ICSA_00349	08/21/20	01/14/20	1%HNO3/0.5%HCl, Lot N/A	100 mL	ME ICPMS LLIC_00026	10 mL	Aluminum	100000 ug/L
							Iron	100000 ug/L
							Molybdenum	2000 ug/L
.ME ICPMS LLIC_00026	08/21/20	Inorganic Ventures, Lot P2-MEB676415			(Purchased Reagent)		Aluminum	1000 ug/mL
							Iron	1000 ug/mL

## REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Molybdenum	20 ug/mL
<b>MEICPMS ICSAB_00276</b>	04/21/20	01/14/20	1%HNO3/0.5%HCl, Lot N/A	100 mL	ME ICPMS CAL_00054	0.2 mL	Ce	20 ug/L
							Cs	20 ug/L
							Rb	20 ug/L
							Silver	20 ug/L
							Aluminum	100020 ug/L
							Iron	100200 ug/L
							U	20 ug/L
							Zinc	20 ug/L
							Antimony	20 ug/L
							Arsenic	20 ug/L
							Barium	20 ug/L
							Beryllium	20 ug/L
							Cadmium	20 ug/L
							Chromium	20 ug/L
							Cobalt	20 ug/L
							Copper	20 ug/L
							Lead	20 ug/L
							Manganese	20 ug/L
							Molybdenum	2020 ug/L
							Nickel	20 ug/L
							Selenium	20 ug/L
							Strontium	20 ug/L
							Thallium	20 ug/L
							Tin	20 ug/L
							Vanadium	20 ug/L
					ME ICPMS LLIC_00026	10 mL	Aluminum	100020 ug/L
							Iron	100200 ug/L
							Molybdenum	2020 ug/L
<b>.ME ICPMS CAL_00054</b>	04/21/20	11/12/19	1% HNO3, Lot 5158118	500 mL	CECSRTH 1ST_00001	5 mL	Ce	10 mg/L
							Cs	10 mg/L
							Rb	10 mg/L
					ICPMS STD AG_00002	5 mL	Silver	10 mg/L
					ICPMS STD AL_00001	0.5 mL	Aluminum	10 mg/L
					ICPMS STD FE_00001	5 mL	Iron	100 mg/L
					ICPMS STD U_00001	5 mL	U	10 mg/L
					ICPMS STD ZN_00001	5 mL	Zinc	10 mg/L
					ME ICPMS CAL_00052	50 mL	Antimony	10 mg/L
							Arsenic	10 mg/L
							Barium	10 mg/L
							Beryllium	10 mg/L
							Cadmium	10 mg/L
							Chromium	10 mg/L
							Cobalt	10 mg/L
							Copper	10 mg/L
							Lead	10 mg/L
							Manganese	10 mg/L

## REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Molybdenum	10 mg/L
							Nickel	10 mg/L
							Selenium	10 mg/L
							Strontium	10 mg/L
							Thallium	10 mg/L
							Tin	10 mg/L
							Vanadium	10 mg/L
..CECSRBTB 1ST_00001	09/20/20	CPI International, Lot 10094558-1			(Purchased Reagent)		Ce	1000 ug/mL
							Cs	1000 ug/mL
							Rb	1000 ug/mL
..ICPMS STD AG_00002	10/04/20	CPI International, Lot 975475-22			(Purchased Reagent)		Silver	1000 ug/mL
..ICPMS STD AL_00001	04/22/20	CPI International, Lot 169484-20			(Purchased Reagent)		Aluminum	10000 ug/mL
..ICPMS STD FE_00001	04/22/20	CPI International, Lot 156651-59			(Purchased Reagent)		Iron	10000 ug/mL
..ICPMS STD U_00001	04/22/20	CPI International, Lot 984257-3			(Purchased Reagent)		U	1000 ug/mL
..ICPMS STD ZN_00001	04/22/20	CPI International, Lot 166918-115			(Purchased Reagent)		Zinc	1000 ug/mL
..ME ICPMS CAL_00052	09/18/21	CPI International, Lot 1018875-2			(Purchased Reagent)		Antimony	100 mg/L
							Arsenic	100 mg/L
							Barium	100 mg/L
							Beryllium	100 mg/L
							Cadmium	100 mg/L
							Chromium	100 mg/L
							Cobalt	100 mg/L
							Copper	100 mg/L
							Lead	100 mg/L
							Manganese	100 mg/L
							Molybdenum	100 mg/L
							Nickel	100 mg/L
							Selenium	100 mg/L
							Strontium	100 mg/L
							Thallium	100 mg/L
							Tin	100 mg/L
							Vanadium	100 mg/L
.ME ICPMS LLIC_00026	08/21/20	Inorganic Ventures, Lot P2-MEB676415			(Purchased Reagent)		Aluminum	1000 ug/mL
							Iron	1000 ug/mL
							Molybdenum	20 ug/mL
MEICPMS ICV_00323	04/21/20	01/14/20 1%HNO3/0.5%HCl, Lot N/A	100 mL	ME ICPMS ICV_00230	250 uL		Antimony	25 ug/L
							Arsenic	25 ug/L
							Barium	25 ug/L
							Beryllium	25 ug/L
							Cadmium	25 ug/L
							Chromium	25 ug/L
							Cobalt	25 ug/L
							Copper	25 ug/L
							Lead	25 ug/L
							Manganese	25 ug/L
							Molybdenum	25 ug/L
							Nickel	25 ug/L

## REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.ME ICPMS ICV_00230	04/21/20	11/12/19	1% HNO3, Lot 5158118	500 mL	ME ICPMS CAL_00053	50 mL	Selenium	25 ug/L
							Thallium	25 ug/L
							Vanadium	25 ug/L
							Silver	25 ug/L
							Zinc	25 ug/L
							Antimony	10 mg/L
							Arsenic	10 mg/L
							Barium	10 mg/L
							Beryllium	10 mg/L
							Cadmium	10 mg/L
							Chromium	10 mg/L
							Cobalt	10 mg/L
							Copper	10 mg/L
							Lead	10 mg/L
							Manganese	10 mg/L
							Molybdenum	10 mg/L
							Nickel	10 mg/L
							Selenium	10 mg/L
							Thallium	10 mg/L
							Vanadium	10 mg/L
							Silver	10 mg/L
							Zinc	10 mg/L
..ME ICPMS CAL_00053	03/27/21	CPI International, Lot 992738-1		(Purchased Reagent)			Antimony	100 mg/L
							Arsenic	100 mg/L
							Barium	100 mg/L
							Beryllium	100 mg/L
							Cadmium	100 mg/L
							Chromium	100 mg/L
							Cobalt	100 mg/L
							Copper	100 mg/L
							Lead	100 mg/L
							Manganese	100 mg/L
							Molybdenum	100 mg/L
							Nickel	100 mg/L
							Selenium	100 mg/L
..ME SILVER 2nd 00001	07/08/20	CPI International, Lot 711054039C-1		(Purchased Reagent)			Thallium	100 mg/L
							Vanadium	100 mg/L
..ME ZINC 2nd 00001	07/08/20	CPI International, Lot 711054039B-1		(Purchased Reagent)			Silver	1000 ug/mL
							Zinc	1000 ug/mL
MEICPMS STD1_00326	04/21/20	01/14/20	1%HNO3/0.5%HCl, Lot N/A	100 mL	MEICPMS STD3_00425	2 mL	Silver	0.2 ug/L
							Zinc	0.2 ug/L
							Antimony	0.2 ug/L
							Arsenic	0.2 ug/L
							Barium	0.2 ug/L
							Beryllium	0.2 ug/L
							Cadmium	0.2 ug/L
							Chromium	0.2 ug/L

## REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Cobalt	0.2 ug/L
							Copper	0.2 ug/L
							Lead	0.2 ug/L
							Manganese	0.2 ug/L
							Molybdenum	0.2 ug/L
							Nickel	0.2 ug/L
							Selenium	0.2 ug/L
							Thallium	0.2 ug/L
							Vanadium	0.2 ug/L
.MEICPMS STD3_00425	04/21/20	01/14/20	1%HNO3/0.5%HCl, Lot N/A	100 mL	MEICPMS STD4_00325	10 mL	Silver	10 ug/L
							Zinc	10 ug/L
							Antimony	10 ug/L
							Arsenic	10 ug/L
							Barium	10 ug/L
							Beryllium	10 ug/L
							Cadmium	10 ug/L
							Chromium	10 ug/L
							Cobalt	10 ug/L
							Copper	10 ug/L
							Lead	10 ug/L
							Manganese	10 ug/L
							Molybdenum	10 ug/L
							Nickel	10 ug/L
							Selenium	10 ug/L
							Thallium	10 ug/L
							Vanadium	10 ug/L
..MEICPMS STD4_00325	04/21/20	01/14/20	1%HNO3/0.5%HCl, Lot N/A	100 mL	ME ICPMS CAL_00054	1 mL	Silver	100 ug/L
							Zinc	100 ug/L
							Antimony	100 ug/L
							Arsenic	100 ug/L
							Barium	100 ug/L
							Beryllium	100 ug/L
							Cadmium	100 ug/L
							Chromium	100 ug/L
							Cobalt	100 ug/L
							Copper	100 ug/L
							Lead	100 ug/L
							Manganese	100 ug/L
							Molybdenum	100 ug/L
							Nickel	100 ug/L
							Selenium	100 ug/L
							Thallium	100 ug/L
							Vanadium	100 ug/L
...ME ICPMS CAL_00054	04/21/20	11/12/19	1% HNO3, Lot 5158118	500 mL	ICPMS STD AG_00002 ICPMS STD ZN_00001 ME ICPMS CAL_00052	5 mL 5 mL 50 mL	Silver Zinc Antimony	10 mg/L 10 mg/L 10 mg/L
							Arsenic	10 mg/L
							Barium	10 mg/L

## REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Beryllium	10 mg/L
							Cadmium	10 mg/L
							Chromium	10 mg/L
							Cobalt	10 mg/L
							Copper	10 mg/L
							Lead	10 mg/L
							Manganese	10 mg/L
							Molybdenum	10 mg/L
							Nickel	10 mg/L
							Selenium	10 mg/L
							Thallium	10 mg/L
							Vanadium	10 mg/L
....ICPMS STD AG 00002	10/04/20	CPI International, Lot 975475-22		(Purchased Reagent)			Silver	1000 ug/mL
....ICPMS STD ZN 00001	04/22/20	CPI International, Lot 166918-115		(Purchased Reagent)			Zinc	1000 ug/mL
....ME ICPMS CAL_00052	09/18/21	CPI International, Lot 1018875-2		(Purchased Reagent)			Antimony	100 mg/L
							Arsenic	100 mg/L
							Barium	100 mg/L
							Beryllium	100 mg/L
							Cadmium	100 mg/L
							Chromium	100 mg/L
							Cobalt	100 mg/L
							Copper	100 mg/L
							Lead	100 mg/L
							Manganese	100 mg/L
							Molybdenum	100 mg/L
							Nickel	100 mg/L
							Selenium	100 mg/L
							Thallium	100 mg/L
							Vanadium	100 mg/L
MEICPMS STD3_00425	04/21/20	01/14/20	1%HNO3/0.5%HCl, Lot N/A	100 mL	MEICPMS STD4_00325	10 mL	Silver	10 ug/L
							Zinc	10 ug/L
							Antimony	10 ug/L
							Arsenic	10 ug/L
							Barium	10 ug/L
							Beryllium	10 ug/L
							Cadmium	10 ug/L
							Chromium	10 ug/L
							Cobalt	10 ug/L
							Copper	10 ug/L
							Lead	10 ug/L
							Manganese	10 ug/L
							Molybdenum	10 ug/L
							Nickel	10 ug/L
							Selenium	10 ug/L
							Thallium	10 ug/L
							Vanadium	10 ug/L
.MEICPMS STD4_00325	04/21/20	01/14/20	1%HNO3/0.5%HCl, Lot N/A	100 mL	ME ICPMS CAL_00054	1 mL	Silver	100 ug/L

## REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Zinc	100 ug/L
							Antimony	100 ug/L
							Arsenic	100 ug/L
							Barium	100 ug/L
							Beryllium	100 ug/L
							Cadmium	100 ug/L
							Chromium	100 ug/L
							Cobalt	100 ug/L
							Copper	100 ug/L
							Lead	100 ug/L
							Manganese	100 ug/L
							Molybdenum	100 ug/L
							Nickel	100 ug/L
							Selenium	100 ug/L
							Thallium	100 ug/L
							Vanadium	100 ug/L
..ME ICPMS CAL_00054	04/21/20	11/12/19	1% HNO3, Lot 5158118	500 mL	ICPMS STD AG_00002 ICPMS STD ZN_00001 ME ICPMS CAL_00052	5 mL 5 mL 50 mL	Silver Zinc Antimony Arsenic Barium Beryllium Cadmium Chromium Cobalt Copper Lead Manganese Molybdenum Nickel Selenium Thallium Vanadium	10 mg/L 10 mg/L
...ICPMS STD AG_00002	10/04/20	CPI International, Lot 975475-22			(Purchased Reagent)		Silver	1000 ug/mL
...ICPMS STD ZN_00001	04/22/20	CPI International, Lot 166918-115			(Purchased Reagent)		Zinc	1000 ug/mL
...ME ICPMS CAL_00052	09/18/21	CPI International, Lot 1018875-2			(Purchased Reagent)		Antimony Arsenic Barium Beryllium Cadmium Chromium Cobalt Copper Lead Manganese Molybdenum Nickel Selenium	100 mg/L 100 mg/L

## REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Thallium	100 mg/L
							Vanadium	100 mg/L
<b>MEICPMS STD3_00426</b>	04/21/20	01/14/20	1%HNO3/0.5%HCl, Lot N/A	100 mL	MEICPMS STD3_00425	10 mL	Silver	1 ug/L
							Zinc	1 ug/L
							Antimony	1 ug/L
							Arsenic	1 ug/L
							Barium	1 ug/L
							Beryllium	1 ug/L
							Cadmium	1 ug/L
							Chromium	1 ug/L
							Cobalt	1 ug/L
							Copper	1 ug/L
							Lead	1 ug/L
							Manganese	1 ug/L
							Molybdenum	1 ug/L
							Nickel	1 ug/L
							Selenium	1 ug/L
							Thallium	1 ug/L
							Vanadium	1 ug/L
<b>.MEICPMS STD3_00425</b>	04/21/20	01/14/20	1%HNO3/0.5%HCl, Lot N/A	100 mL	MEICPMS STD4_00325	10 mL	Silver	10 ug/L
							Zinc	10 ug/L
							Antimony	10 ug/L
							Arsenic	10 ug/L
							Barium	10 ug/L
							Beryllium	10 ug/L
							Cadmium	10 ug/L
							Chromium	10 ug/L
							Cobalt	10 ug/L
							Copper	10 ug/L
							Lead	10 ug/L
							Manganese	10 ug/L
							Molybdenum	10 ug/L
							Nickel	10 ug/L
							Selenium	10 ug/L
							Thallium	10 ug/L
							Vanadium	10 ug/L
<b>..MEICPMS STD4_00325</b>	04/21/20	01/14/20	1%HNO3/0.5%HCl, Lot N/A	100 mL	ME ICPMS CAL_00054	1 mL	Silver	100 ug/L
							Zinc	100 ug/L
							Antimony	100 ug/L
							Arsenic	100 ug/L
							Barium	100 ug/L
							Beryllium	100 ug/L
							Cadmium	100 ug/L
							Chromium	100 ug/L
							Cobalt	100 ug/L
							Copper	100 ug/L
							Lead	100 ug/L

## REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration		
					Reagent ID	Volume Added				
...ME ICPMS CAL_00054	04/21/20	11/12/19	1% HNO <sub>3</sub> , Lot 5158118	500 mL	ICPMS STD AG_00002	5 mL	Manganese	100 ug/L		
					ICPMS STD ZN_00001	5 mL	Molybdenum	100 ug/L		
					ME ICPMS CAL_00052	50 mL	Nickel	100 ug/L		
							Selenium	100 ug/L		
							Thallium	100 ug/L		
							Vanadium	100 ug/L		
							Silver	10 mg/L		
							Zinc	10 mg/L		
							Antimony	10 mg/L		
							Arsenic	10 mg/L		
							Barium	10 mg/L		
							Beryllium	10 mg/L		
							Cadmium	10 mg/L		
							Chromium	10 mg/L		
							Cobalt	10 mg/L		
							Copper	10 mg/L		
							Lead	10 mg/L		
							Manganese	10 mg/L		
							Molybdenum	10 mg/L		
							Nickel	10 mg/L		
							Selenium	10 mg/L		
							Thallium	10 mg/L		
							Vanadium	10 mg/L		
....ICPMS STD AG_00002	10/04/20	CPI International, Lot 975475-22		(Purchased Reagent)		Silver		1000 ug/mL		
....ICPMS STD ZN_00001	04/22/20	CPI International, Lot 166918-115		(Purchased Reagent)		Zinc		1000 ug/mL		
....ME ICPMS CAL_00052	09/18/21	CPI International, Lot 1018875-2		(Purchased Reagent)		Antimony		100 mg/L		
						Arsenic		100 mg/L		
						Barium		100 mg/L		
						Beryllium		100 mg/L		
						Cadmium		100 mg/L		
						Chromium		100 mg/L		
						Cobalt		100 mg/L		
						Copper		100 mg/L		
						Lead		100 mg/L		
						Manganese		100 mg/L		
						Molybdenum		100 mg/L		
						Nickel		100 mg/L		
						Selenium		100 mg/L		
						Thallium		100 mg/L		
						Vanadium		100 mg/L		
MEICPMS STD4_00325	04/21/20	01/14/20	1%HNO <sub>3</sub> /0.5%HCl, Lot N/A	100 mL	ME ICPMS CAL_00054	1 mL	Silver	100 ug/L		
							Zinc	100 ug/L		
							Antimony	100 ug/L		
							Arsenic	100 ug/L		
							Barium	100 ug/L		
							Beryllium	100 ug/L		
							Cadmium	100 ug/L		

## REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chromium	100 ug/L
							Cobalt	100 ug/L
							Copper	100 ug/L
							Lead	100 ug/L
							Manganese	100 ug/L
							Molybdenum	100 ug/L
							Nickel	100 ug/L
							Selenium	100 ug/L
							Thallium	100 ug/L
							Vanadium	100 ug/L
.ME ICPMS CAL_00054	04/21/20	11/12/19	1% HNO3, Lot 5158118	500 mL	ICPMS STD AG_00002	5 mL	Silver	10 mg/L
					ICPMS STD ZN_00001	5 mL	Zinc	10 mg/L
					ME ICPMS CAL_00052	50 mL	Antimony	10 mg/L
							Arsenic	10 mg/L
							Barium	10 mg/L
							Beryllium	10 mg/L
							Cadmium	10 mg/L
							Chromium	10 mg/L
							Cobalt	10 mg/L
							Copper	10 mg/L
							Lead	10 mg/L
							Manganese	10 mg/L
							Molybdenum	10 mg/L
							Nickel	10 mg/L
							Selenium	10 mg/L
							Thallium	10 mg/L
							Vanadium	10 mg/L
..ICPMS STD AG_00002	10/04/20	CPI International, Lot 975475-22		(Purchased Reagent)		Silver	1000 ug/mL	
..ICPMS STD ZN_00001	04/22/20	CPI International, Lot 166918-115		(Purchased Reagent)		Zinc	1000 ug/mL	
..ME ICPMS CAL_00052	09/18/21	CPI International, Lot 1018875-2		(Purchased Reagent)		Antimony	100 mg/L	
						Arsenic	100 mg/L	
						Barium	100 mg/L	
						Beryllium	100 mg/L	
						Cadmium	100 mg/L	
						Chromium	100 mg/L	
						Cobalt	100 mg/L	
						Copper	100 mg/L	
						Lead	100 mg/L	
						Manganese	100 mg/L	
						Molybdenum	100 mg/L	
						Nickel	100 mg/L	
						Selenium	100 mg/L	
						Thallium	100 mg/L	
						Vanadium	100 mg/L	

Reagent

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**Aluminum\_00001**



Rec. 7/18/19  
Open 9/9/19  
5794032

## CERTIFICATE OF ANALYSIS

Single-Element Aqueous CRM

Product #: TA-10M11

SE Std Aluminum (Al) – 10,000 µg/mL

Lot #: 169484-20

Matrix: 5% HNO<sub>3</sub>

Element	Certified Concentration & Uncertainty
Al	10,030 ± 20 µg/mL (w/v)
	9428 ± 22 µg/g (w/w)

**Intended Use:** This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

**Certification & Traceability:** This CRM was manufactured, processed, and certified under a quality management system that is registered/accredited to ISO 9001, ISO 17034, and ISO/IEC 17025. This CRM was prepared to a nominal concentration of 10,000 µg/mL by gravimetric methods using 99.999% pure aluminum nitrate [Al(NO<sub>3</sub>)<sub>3</sub>] dissolved in high purity nitric acid (HNO<sub>3</sub>) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration and uncertainty were determined using the "High Performance ICP-OES" protocol developed by NIST, and both the certified concentration and uncertainty values are traceable to NIST SRM 3101a, lot #140903. The uncertainty associated with the certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

**Indicative Values:** ICP-MS was used to determine trace metal concentrations for this product (nd = not determined).

Trace Concentrations (µg/L)													
Ag	<5	Co	<10	Ge	<5	Mg	<50	Pd	<5	Si	<1000	V	<10
Al	MAJOR	Cs	<5	Hf	<2	Mn	<10	Pr	<2	Sm	<2	W	16
As	<20	Cr	89	Hg	<5	Mo	<5	Pt	<5	Sn	<5	Y	<5
Au	<5	Cu	<10	Ho	<2	Na	3315	Rb	<5	Sr	<10	Yb	<2
B	<50	Dy	<2	In	nd	Nb	<5	Re	<2	Ta	<5	Zn	30
Ba	<10	Er	<2	Ir	<2	Nd	<2	Rh	<5	Tb	<5		
Bi	<2	Eu	<2	K	<250	Ni	<20	Ru	<5	Te	<10		
Ca	330	Fe	890	La	<5	Os	<5	Sb	<5	Ti	<20		
Cd	<5	Ga	681	Li	<20	P	<1000	Sc	<50	Tl	10		
Ce	<2	Gd	<2	Lu	<2	Pb	<10	Se	<20	Tm	<2		

**Instructions for Use:** We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

**Period of Validity:** CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau, Certifying Officer

April 4, 2019

Certification Date

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## CERTIFICATE OF ANALYSIS

Single-Element Aqueous CRM

Product #: TA-10M91

**SE Std Calcium (Ca) – 10,000 µg/mL**

Lot #: 147497-100

Matrix: 5% HNO<sub>3</sub>

Element	Certified Concentration & Uncertainty
Ca	9989 ± 22 µg/mL (w/v)
	9652 ± 21 µg/g (w/w)

**Intended Use:** This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

**Certification & Traceability:** This CRM was manufactured, processed, and certified under a quality management system that is registered/accredited to ISO 9001, ISO 17034, and ISO/IEC 17025. This CRM was prepared to a nominal concentration of 10,000 µg/mL by gravimetric methods using 99.999% pure calcium carbonate (CaCO<sub>3</sub>) dissolved in high purity nitric acid (HNO<sub>3</sub>) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration and uncertainty were determined using the "High Performance ICP-OES" protocol developed by NIST, and both the certified concentration and uncertainty values are traceable to NIST SRM 3109a, lot #130213. The uncertainty associated with the certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

**Indicative Values:** ICP-MS was used to determine trace metal concentrations for this product (nd = not determined).

Trace Concentrations (µg/L)													
Ag	<5	Co	<10	Ge	<5	Mg	<50	Pd	<5	Si	<1000	V	<10
Al	<20	Cs	<5	Hf	<2	Mn	<10	Pr	<2	Sm	<2	W	<5
As	<20	Cr	<5	Hg	<5	Mo	<5	Pt	<5	Sn	6	Y	<5
Au	<5	Cu	<10	Ho	<2	Na	<250	Rb	<5	Sr	294	Yb	<2
B	<50	Dy	<2	In	nd	Nb	<5	Re	<2	Ta	<5	Zn	<20
Ba	<10	Er	<2	Ir	<2	Nd	<2	Rh	<5	Tb	<5		
Bi	<2	Eu	<2	K	<250	Ni	<20	Ru	<5	Te	<10		
Ca	MAJOR	Fe	<100	La	9	Os	<5	Sb	<5	Ti	<20		
Cd	<5	Ga	<5	Li	<20	P	<1000	Sc	<50	Tl	<5		
Ce	<2	Gd	<2	Lu	<2	Pb	<10	Se	<20	Tm	<2		

**Instructions for Use:** We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

**Period of Validity:** CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau, Certifying Officer

April 4, 2019

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## CERTIFICATE OF ANALYSIS

Single-Element Aqueous CRM

Product #: TA-10M261

SE Std Iron (Fe) – 10,000 µg/mL

Lot #: 156651-59

Matrix: 5% HNO<sub>3</sub>

Element	Certified Concentration & Uncertainty
Fe	10,010 ± 40 µg/mL (w/v)
	9609 ± 34 µg/g (w/w)

**Intended Use:** This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

**Certification & Traceability:** This CRM was manufactured, processed, and certified under a quality management system that is registered/accredited to ISO 9001, ISO 17034, and ISO/IEC 17025. This CRM was prepared to a nominal concentration of 10,000 µg/mL by gravimetric methods using 99.999% pure iron nitrate nonahydrate [Fe(NO<sub>3</sub>)<sub>3</sub>] dissolved in high purity nitric acid (HNO<sub>3</sub>) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration and uncertainty were determined using the "High Performance ICP-OES" protocol developed by NIST, and both the certified concentration and uncertainty values are traceable to NIST SRM 3126a, lot #140812. The uncertainty associated with the certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

**Indicative Values:** ICP-MS was used to determine trace metal concentrations for this product (nd = not determined).

Trace Concentrations (µg/L)													
Ag	<5	Co	24	Ge	<5	Mg	<50	Pd	<5	Si	<1000	V	<10
Al	37	Cs	<5	Hf	<2	Mn	13	Pr	<2	Sm	<2	W	<5
As	<20	Cr	37	Hg	<5	Mo	<5	Pt	<5	Sn	<5	Y	<5
Au	<5	Cu	<10	Ho	<2	Na	<250	Rb	<5	Sr	<10	Yb	<2
B	<50	Dy	<2	In	nd	Nb	<5	Re	<2	Ta	<5	Zn	<20
Ba	27	Er	<2	Ir	<2	Nd	<2	Rh	<5	Tb	<5		
Bi	<2	Eu	<2	K	<250	Ni	<20	Ru	<5	Te	<10		
Ca	<250	Fe	MAJOR	La	<5	Os	<5	Sb	<5	Ti	<20		
Cd	<5	Ga	<5	Li	<20	P	<1000	Sc	<50	Tl	<5		
Ce	<2	Gd	<2	Lu	<2	Pb	<10	Se	<20	Tm	<2		

**Instructions for Use:** We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

**Period of Validity:** CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau, Certifying Officer

April 4, 2019

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## CERTIFICATE OF ANALYSIS

Single-Element Aqueous CRM

Product #: TA-10M311

**SE Std Magnesium (Mg) – 10,000 µg/mL**

Lot #: 148250-105

Matrix: 5% HNO<sub>3</sub>

Element	Certified Concentration & Uncertainty
Mg	9921 ± 37 µg/mL (w/v)
	9456 ± 36 µg/g (w/w)

**Intended Use:** This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

**Certification & Traceability:** This CRM was manufactured, processed, and certified under a quality management system that is registered/accredited to ISO 9001, ISO 17034, and ISO/IEC 17025. This CRM was prepared to a nominal concentration of 10,000 µg/mL by gravimetric methods using 99.999% pure magnesium nitrate [Mg(NO<sub>3</sub>)<sub>2</sub>] dissolved in high purity nitric acid (HNO<sub>3</sub>) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration and uncertainty were determined using the "High Performance ICP-OES" protocol developed by NIST, and both the certified concentration and uncertainty values are traceable to NIST SRM 3131a, lot #140110. The uncertainty associated with the certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

**Indicative Values:** ICP-MS was used to determine trace metal concentrations for this product (nd = not determined).

Trace Concentrations (µg/L)													
Ag	8	Co	<10	Ge	<5	Mg	MAJOR	Pd	<5	Si	<1000	V	<10
Al	<20	Cs	<5	Hf	<2	Mn	32	Pr	<2	Sm	<2	W	<5
As	<20	Cr	<5	Hg	<5	Mo	7	Pt	<5	Sn	<5	Y	<5
Au	<5	Cu	<10	Ho	<2	Na	<250	Rb	<5	Sr	<10	Yb	<2
B	<50	Dy	<2	In	nd	Nb	<5	Re	<2	Ta	<5	Zn	<20
Ba	<10	Er	<2	Ir	<2	Nd	<2	Rh	<5	Tb	<5		
Bi	<2	Eu	<2	K	<250	Ni	<20	Ru	<5	Te	<10		
Ca	1440	Fe	<100	La	<5	Os	<5	Sb	<5	Ti	<20		
Cd	9	Ga	<5	Li	<20	P	<1000	Sc	<50	Tl	<5		
Ce	17	Gd	13	Lu	<2	Pb	<10	Se	<20	Tm	<2		

**Instructions for Use:** We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

**Period of Validity:** CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

\_\_\_\_\_  
**Chuck Goudreau, Certifying Officer**

April 4, 2019  
\_\_\_\_\_  
**Certification Date**

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**Boron\_00001**



5550878

## CERTIFICATE OF ANALYSIS

Single-Element Aqueous CRM

Product #: TA-100074

SE Std Boron (B) – 1000 µg/mL

Lot #: 982524-31

Matrix: H<sub>2</sub>O

Element	Certified Concentration & Uncertainty
B	1001 ± 2 µg/mL (w/v)
	1003 ± 2 µg/g (w/w)

**Intended Use:** This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

**Certification & Traceability:** This CRM was manufactured, processed, and certified under a quality management system that is registered/accredited to ISO 9001, ISO 17034, and ISO/IEC 17025. This CRM was prepared to a nominal concentration of 1000 µg/mL by gravimetric methods using 99.9995% pure boric acid (H<sub>3</sub>BO<sub>3</sub>) dissolved and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration and uncertainty were determined using the "High Performance ICP-OES" protocol developed by NIST, and both the certified concentration and uncertainty values are traceable to **NIST SRM 3107, lot #110830**. The uncertainty associated with the certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

**Indicative Values:** ICP-MS was used to determine trace metal concentrations for this product (nd = not determined).

### Trace Concentrations (µg/L)

Ag	<0.5	Co	<1	Ge	<0.5	Lu	<0.2	P	<100	Sb	<0.5	Te	<1
Al	<5	Cs	<0.5	Hf	<0.2	Mg	<5	Pb	<1	Sc	<5	Ti	<2
As	<2	Cr	<0.5	Hg	<0.5	Mn	<1	Pd	<0.5	Se	<2	Tl	<0.5
Au	<0.5	Cu	<1	Ho	<0.2	Mo	<0.5	Pr	<0.2	Si	<100	Tm	<0.2
B	MAJOR	Dy	<0.2	In	nd	Na	<25	Pt	<0.5	Sm	<0.2	V	<1
Ba	<1	Er	<0.2	Ir	<0.2	Nb	<0.5	Rb	<0.5	Sn	<0.5	W	<0.5
Bi	<0.2	Eu	<0.2	K	<25	Nd	<0.2	Re	<0.2	Sr	<1	Y	<0.5
Ca	<25	Fe	<10	La	<0.5	Ni	<2	Rh	<0.5	Ta	<0.5	Yb	<0.2
Cd	<0.5	Ga	<0.5	Li	<2	Os	<0.5	Ru	<0.5	Tb	<0.5	Zn	<2
Ce	<0.2	Gd	<0.2										

**Instructions for Use:** We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

**Period of Validity:** CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau, Certifying Officer

March 28, 2019

Certification Date

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**Calcium\_00008**



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## CERTIFICATE OF ANALYSIS

Single-Element Aqueous CRM

Product #: TA-10M91

**SE Std Calcium (Ca) – 10,000 µg/mL**

Lot #: 147497-100

Matrix: 5% HNO<sub>3</sub>

Element	Certified Concentration & Uncertainty
Ca	9989 ± 22 µg/mL (w/v)
	9652 ± 21 µg/g (w/w)

**Intended Use:** This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

**Certification & Traceability:** This CRM was manufactured, processed, and certified under a quality management system that is registered/accredited to ISO 9001, ISO 17034, and ISO/IEC 17025. This CRM was prepared to a nominal concentration of 10,000 µg/mL by gravimetric methods using 99.999% pure calcium carbonate (CaCO<sub>3</sub>) dissolved in high purity nitric acid (HNO<sub>3</sub>) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration and uncertainty were determined using the "High Performance ICP-OES" protocol developed by NIST, and both the certified concentration and uncertainty values are traceable to NIST SRM 3109a, lot #130213. The uncertainty associated with the certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

**Indicative Values:** ICP-MS was used to determine trace metal concentrations for this product (nd = not determined).

Trace Concentrations (µg/L)													
Ag	<5	Co	<10	Ge	<5	Mg	<50	Pd	<5	Si	<1000	V	<10
Al	<20	Cs	<5	Hf	<2	Mn	<10	Pr	<2	Sm	<2	W	<5
As	<20	Cr	<5	Hg	<5	Mo	<5	Pt	<5	Sn	6	Y	<5
Au	<5	Cu	<10	Ho	<2	Na	<250	Rb	<5	Sr	294	Yb	<2
B	<50	Dy	<2	In	nd	Nb	<5	Re	<2	Ta	<5	Zn	<20
Ba	<10	Er	<2	Ir	<2	Nd	<2	Rh	<5	Tb	<5		
Bi	<2	Eu	<2	K	<250	Ni	<20	Ru	<5	Te	<10		
Ca	MAJOR	Fe	<100	La	9	Os	<5	Sb	<5	Ti	<20		
Cd	<5	Ga	<5	Li	<20	P	<1000	Sc	<50	Tl	<5		
Ce	<2	Gd	<2	Lu	<2	Pb	<10	Se	<20	Tm	<2		

**Instructions for Use:** We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

**Period of Validity:** CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

**Chuck Goudreau, Certifying Officer**

April 4, 2019  
**Certification Date**

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**CECSRBTH 1ST\_00001**



## CERTIFICATE OF ANALYSIS

Multi-Element Aqueous CRM

Product #: TA-CM-FEB19-IRV1-100

### Custom Standard

Lot #: 10094558-1

Matrix: 2% HNO<sub>3</sub>

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
Ce	1000 ± 5 µg/mL	Rb	1000 ± 5 µg/mL
Cs	999.8 ± 5.0 µg/mL	Th	1000 ± 5 µg/mL

**Intended Use:** This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

**Certification & Traceability:** This CRM was manufactured, processed, and certified under a quality management system that is registered/accredited to ISO 9001, ISO Guide 34, and ISO/IEC 17025. This CRM was prepared to the certified concentrations shown above by gravimetric methods, using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to **NIST SRMs (see reverse side)**. The solution was stabilized using high purity nitric acid (HNO<sub>3</sub>), and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against **NIST SRMs (see reverse side)**. The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

**Instructions for Use:** We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

**Period of Validity:** CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.



Chuck Goudreau, Certifying Officer

March 20, 2019

Certification Date

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Page 1 of 2

**Health and Safety Information:** Refer to the Safety Data Sheet (SDS).

**Homogeneity:** This solution was determined to be homogeneous by procedures consistent with the requirements of ISO Guide 34 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with QSP 6-13 Assessment of Homogeneity and Stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

**Quality Manual Rev:** No. 5, 03/01/2013

**Further Information:** Please contact CPI International for further information about this CRM.

**Quality Certifications:** This CRM was prepared under a quality management system that is registered/accredited to the following:

- ISO 9001 – Quality Management Systems – Requirements (TUV NORD Cert. No. 44 100 16560231)
- ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories (A2LA Cert. No. 2848.01)
- ISO Guide 34 – General Requirements for the Competence of Reference Material Producers (A2LA Cert. No. 2848.02)
  - ISO Guide 34 references additional requirements specified in ISO Guide 31 and ISO Guide 35.

**This CRM is traceable to the following NIST SRMs:**

Analyte	Aq. SRM	MO SRM		Analyte	Aq. SRM	MO SRM		Analyte	Aq. SRM	MO SRM
Ag	3151	1077a		Hf	3122	—		S	3154	2770
Al	3101a	1075a		Hg	3133	3133		Sb	3102a	3102a
As	3103a	3103a		Ho	3123a	—		Sc	3148a	3148a
Au	3121	—		In	3124a	3124a		Se	3149	3149
B	3107	3107		K	3141a	3141a		Si	3150	1066a
Ba	3104a	1051b		La	3127a	3127a		Sm	3147a	—
Be	3105a	3105a		Li	3129a	3129a		Sn	3161a	1057b
Bi	3106	3106		Lu	3130a	—		SO <sub>4</sub> <sup>2-</sup>	3181	—
Br	3184	—		Mg	3131a	3131a		Sr	3153a	3153a
Ca	3109a	3109a		Mn	3132	3132		Ta	3155	—
Cd	3108	1053a		Mo	3134	3134		Tb	3157a	—
Ce	3110	3110		Na	3152a	3152a		Te	3156	—
Cl <sup>-</sup>	3182	1818a		Nb	3137	—		Th	3159	—
Co	3113	3113		Nd	3135a	—		Ti	3162a	3162a
Cr	3112a	1078b		Ni	3136	1065b		Tl	3158	3158
Cs	3111a	—		NO <sub>3</sub> <sup>-</sup>	3185	—		Tm	3160a	—
Cu	3114	1080a		P	3139a	3139a		U	3164	—
Dy	3115a	—		Pb	3128	3128		V	3165	1052b
Er	3116a	—		Pd	3138	—		W	3163	3163
Eu	3117a	—		PO <sub>4</sub> <sup>3-</sup>	3186	—		Y	3167a	3167a
F <sup>-</sup>	3183	—		Pr	3142a	—		Yb	3166a	—
Fe	3126a	1079b		Pt	3140	3140		Zn	3168a	3168a
Ga	3119a	—		Rb	3145a	—		Zr	3169	3169
Gd	3118a	—		Re	3143	—				
Ge	3120a	—		Rh	3144	3144				

Reagent

---

**Custom mix A\_00001**



300 Technology Drive  
Christiansburg, VA 24073 - USA  
inorganicventures.com

## CERTIFICATE OF ANALYSIS

toll: 800.669.6799 • 540.585.3030  
fax: 540.585.3012  
info@inorganicventures.com

Rec. 10/31/17

ID 4457188

### 1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



ACCREDITED

ACCREDITED

Testing Laboratory  
Certificate 883.01

Reference Material Producer  
Certificate 883.02

### 2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution		
Catalog Number:	TA-86REV1		
Lot Number:	M2-MEB662656		
Matrix:	5% (v/v) HNO <sub>3</sub>		
Value / Analyte(s):	5 000 µg/mL ea:	Potassium,	Sodium,
	2 000 µg/mL ea:		
	1 000 µg/mL ea:	Phosphorus,	
	Iron,	Iron,	Aluminum,
	500 µg/mL ea:		Calcium,
	Boron,		Lithium,
	200 µg/mL ea:	Magnesium,	Manganese,
	Zinc,		Strontium,
	100 µg/mL ea:		
	Thallium,	Vanadium,	Selenium,
	Nickel,	Silver,	Copper,
	Barium,	Arsenic,	Cobalt,
	50 µg/mL ea:		
	Chromium,	Cadmium,	Lead,
	20 µg/mL ea:		
	Beryllium		

### 3.0 CERTIFIED VALUES AND UNCERTAINTIES

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<b>ANALYTE</b>	<b>CERTIFIED VALUE</b>	<b>ANALYTE</b>	<b>CERTIFIED VALUE</b>
Aluminum, Al	$1\ 000 \pm 3 \text{ }\mu\text{g/mL}$	Arsenic, As	$100.0 \pm 0.6 \text{ }\mu\text{g/mL}$
Barium, Ba	$100.0 \pm 0.4 \text{ }\mu\text{g/mL}$	Beryllium, Be	$20.00 \pm 0.12 \text{ }\mu\text{g/mL}$
Boron, B	$500.0 \pm 3.0 \text{ }\mu\text{g/mL}$	Cadmium, Cd	$50.00 \pm 0.21 \text{ }\mu\text{g/mL}$
Calcium, Ca	$1\ 000 \pm 4 \text{ }\mu\text{g/mL}$	Chromium, Cr	$50.00 \pm 0.31 \text{ }\mu\text{g/mL}$
Cobalt, Co	$100.0 \pm 0.5 \text{ }\mu\text{g/mL}$	Copper, Cu	$100.0 \pm 0.4 \text{ }\mu\text{g/mL}$
Iron, Fe	$1\ 000 \pm 4 \text{ }\mu\text{g/mL}$	Lead, Pb	$50.00 \pm 0.22 \text{ }\mu\text{g/mL}$
Lithium, Li	$500.0 \pm 2.1 \text{ }\mu\text{g/mL}$	Magnesium, Mg	$200.0 \pm 0.8 \text{ }\mu\text{g/mL}$
Manganese, Mn	$200.0 \pm 0.8 \text{ }\mu\text{g/mL}$	Nickel, Ni	$100.0 \pm 0.4 \text{ }\mu\text{g/mL}$
<u>Phosphorus, P</u>	<u><math>2\ 000 \pm 9 \text{ }\mu\text{g/mL}</math></u>	Potassium, K	$5\ 000 \pm 19 \text{ }\mu\text{g/mL}$
Selenium, Se	$100.0 \pm 0.6 \text{ }\mu\text{g/mL}$	Silver, Ag	$100.0 \pm 0.4 \text{ }\mu\text{g/mL}$
Sodium, Na	$5\ 000 \pm 19 \text{ }\mu\text{g/mL}$	Strontium, Sr	$200.0 \pm 0.8 \text{ }\mu\text{g/mL}$
Thallium, Tl	$100.0 \pm 0.5 \text{ }\mu\text{g/mL}$	Vanadium, V	$100.0 \pm 0.4 \text{ }\mu\text{g/mL}$
Zinc, Zn	$200.0 \pm 0.8 \text{ }\mu\text{g/mL}$		

**Density:** 1.074 g/mL (measured at  $20 \pm 4 \text{ }^{\circ}\text{C}$ )

**Assay Information:**

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE	ANALYTE	METHOD	NIST SRM#	SRM LOT#
Aluminum, Al	1 000 ± 3 µg/mL	Arsenic, As	100.0 ± 0.6 µg/mL	Ag	ICP Assay	3151	992212
Barium, Ba	100.0 ± 0.4 µg/mL	Beryllium, Be	20.00 ± 0.12 µg/mL	Ag	Volhard	999c	999c
Boron, B	500.0 ± 3.0 µg/mL	Cadmium, Cd	50.00 ± 0.21 µg/mL	Al	ICP Assay	3101a	140903
Calcium, Ca	1 000 ± 4 µg/mL	Chromium, Cr	50.00 ± 0.31 µg/mL	Al	EDTA	928	928
Cobalt, Co	100.0 ± 0.5 µg/mL	Copper, Cu	100.0 ± 0.4 µg/mL	As	ICP Assay	3103a	100818
Iron, Fe	1 000 ± 4 µg/mL	Lead, Pb	50.00 ± 0.22 µg/mL	B	ICP Assay	3107	110830
Lithium, Li	500.0 ± 2.1 µg/mL	Magnesium, Mg	200.0 ± 0.8 µg/mL	Ba	ICP Assay	3104a	140909
Manganese, Mn	200.0 ± 0.8 µg/mL	Nickel, Ni	100.0 ± 0.4 µg/mL	Ba	Gravimetric		See Sec. 4.2
Phosphorus, P	2 000 ± 9 µg/mL	Potassium, K	5 000 ± 19 µg/mL	Be	ICP Assay	3105a	090514
Selenium, Se	100.0 ± 0.6 µg/mL	Silver, Ag	100.0 ± 0.4 µg/mL	Ca	ICP Assay	3109a	130213
Sodium, Na	5 000 ± 19 µg/mL	Strontium, Sr	200.0 ± 0.8 µg/mL	Ca	EDTA	928	928
Thallium, Tl	100.0 ± 0.5 µg/mL	Vanadium, V	100.0 ± 0.4 µg/mL	Cd	ICP Assay	3108	130116
Zinc, Zn	200.0 ± 0.8 µg/mL			Cd	EDTA	928	928
<b>Density:</b>	1.074 g/mL (measured at 20 ± 4 °C)			Co	ICP Assay	3113	000630 Co
<b>Assay Information:</b>							
				Co	EDTA	928	928
				Cr	ICP Assay	3112a	030730Cr3
				Cu	ICP Assay	3114	121207
				Cu	EDTA	928	928
				Fe	ICP Assay	3126a	140812
				Fe	EDTA	928	928
				K	ICP Assay	3141a	140813
				K	Gravimetric		See Sec. 4.2
				Li	ICP Assay	3129a	100714
				Li	EDTA	928	928
				Mg	ICP Assay	3131a	140110
				Mg	EDTA	928	928
				Mn	ICP Assay	3132	050429
				Mn	EDTA	928	928
				Na	ICP Assay	3152a	120715
				Na	Gravimetric		See Sec. 4.2
				Ni	ICP Assay	3136	120619
				Ni	EDTA	928	928
				P	ICP Assay	3139a	060717
				P	Acidimetric		traceable to 84L
				Pb	ICP Assay	3128	101026
				Pb	EDTA	928	928
				Se	ICP Assay	3149	100901
				Se	Calculated		See Sec. 4.2
				Sr	EDTA	928	928
				Sr	ICP Assay	3153a	990906
				Tl	ICP Assay	3158	993012
				Tl	Calculated		See Sec. 4.2
				V	EDTA	928	928
				V	ICP Assay	3165	992706
				Zn	ICP Assay	3168a	120629
				Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

## Characterization of CRM by two independent methods    Characterization of CRM by one method

### Characterization of CRM/RM by Two Methods

Certified Value,  $X_{CRM/RM}$ , where two methods of characterization are used is the weighted mean of the two results:

$$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$$

$X_a$  = mean of Assay Method A with standard uncertainty  $u_{char\ a}$

$X_b$  = mean of Assay Method B with standard uncertainty  $u_{char\ b}$

$w_a$  and  $w_b$  = the weighting factors for each method calculated using the inverse square of the variance:

$$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2)$$

$$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2)$$

CRM/RM Expanded Uncertainty ( $\pm$ ) =  $U_{CRM/RM} = k (u_{char\ a\&b}^2 + u_{bb}^2 + u_{ts}^2 + u_{ts}^2)^{1/2}$

$k$  = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2 (u_{char\ a})^2 + (w_b)^2 (u_{char\ b})^2]^{1/2}$  where  $u_{char\ a}$  and  $u_{char\ b}$  are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{ts}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

### Characterization of CRM/RM by One Method

Certified Value,  $X_{CRM/RM}$ , where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = \text{mean of Assay Method A with standard uncertainty } u_{char\ a}$$

CRM/RM Expanded Uncertainty ( $\pm$ ) =  $U_{CRM/RM} = k (u_{char\ a}^2 + u_{bb}^2 + u_{ts}^2 + u_{ts}^2)^{1/2}$

$k$  = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a} = \text{square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume}$

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{ts}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

## 4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

### 4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

### 4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

### 4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

## 5.0 TRACE METALLIC IMPURITIES (TMI ) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

## 6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

## 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

### 7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.
- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.
- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.
- For more information, visit [www.inorganicventures.com/TCT](http://www.inorganicventures.com/TCT)

## Characterization of CRM by two independent methods   Characterization of CRM by one method

### Characterization of CRM/RM by Two Methods

Certified Value,  $X_{CRM/RM}$ , where two methods of characterization are used is the weighted mean of the two results:

$$X_{CRM/RM} = [(w_a) (X_a) + (w_b) (X_b)]$$

$X_a$  = mean of Assay Method A with standard uncertainty  $u_{char\ a}$   
 $X_b$  = mean of Assay Method B with standard uncertainty  $u_{char\ b}$

$w_a$  and  $w_b$  = the weighting factors for each method calculated using the inverse square of the variance:

$$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2)$$
$$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2)$$

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char\ a\&b}^2 + u_{bb}^2 + u_{ts}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2 (u_{char\ a})^2 + (w_b)^2 (u_{char\ b})^2]^{1/2}$  where  $u_{char\ a}$  and  $u_{char\ b}$  are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{ts}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

### 4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

#### 4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

#### 4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

#### 4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

### 5.0 TRACE METALLIC IMPURITIES (TMI ) DETERMINED BY ICP-MS AND ICP-OES ( $\mu\text{g/mL}$ )

N/A

### 6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

### 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

#### 7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit [www.inorganicventures.com/TCT](http://www.inorganicventures.com/TCT)

### Characterization of CRM/RM by One Method

Certified Value,  $X_{CRM/RM}$ , where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = \text{mean of Assay Method A with standard uncertainty } u_{char\ a}$$

### 8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

### 9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

### 10.0 QUALITY STANDARD DOCUMENTATION

#### 10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

#### 10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

#### 10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

#### 10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

#### 10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030; Fax: 540.585.3012; [inorganicventures.com](http://inorganicventures.com); [info@inorganicventures.com](mailto:info@inorganicventures.com)

### 11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

#### 11.1 Certification Issue Date

October 26, 2017

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

#### 11.2 Lot Expiration Date

- October 26, 2020

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

#### 11.3 Period of Validity

- Sealed TCT Bag Open Date: \_\_\_\_\_

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

### 12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

**Certificate Approved By:**

Michael Booth  
Supervisor, Quality Control



**Certifying Officer:**

Paul Gaines  
CEO, Senior Technical Director



Reagent

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**Custom mix B\_00001**



300 Technology Drive  
Christiansburg, VA 24073 - USA  
[info@inorganicventures.com](mailto:info@inorganicventures.com)

## CERTIFICATE OF ANALYSIS

tel: 800.669.6799 • 540.585.3030  
fax: 540.585.3012  
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### 1.0 ACCREDITATION / REGISTRATION

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Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



### 2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution  
Catalog Number: TA-87REV1  
Lot Number: M2-MEB662657  
Matrix: 5% (v/v) HNO<sub>3</sub>  
3% (v/v) HF  
Value / Analyte(s): 2 000 µg/mL ea:  
Silicon,  
1 000 µg/mL ea:  
Tin, Tungsten, Zirconium,  
200 µg/mL ea:  
Molybdenum,  
100 µg/mL ea:  
Antimony,  
50 µg/mL ea:  
Titanium

### 3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	100.0 ± 0.6 µg/mL	Molybdenum, Mo	200.0 ± 0.9 µg/mL
Silicon, Si	2 000 ± 13 µg/mL	Tin, Sn	1 000 ± 4 µg/mL
Titanium, Ti	50.00 ± 0.27 µg/mL	Tungsten, W	1 000 ± 7 µg/mL
Zirconium, Zr	1 000 ± 7 µg/mL		

Density: 1.047 g/mL (measured at 20 ± 4 °C)

### Assay Information:

(7)

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	ICP Assay	3134	130418
Mo	Calculated		See Sec. 4.2
Sb	ICP Assay	3102a	140911
Si	ICP Assay	3150	130912
Sn	ICP Assay	3161a	070330
Sn	Calculated		See Sec. 4.2
Ti	ICP Assay	3162a	130925
Ti	Calculated		See Sec. 4.2
W	ICP Assay	3163	140606
Zr	ICP Assay	3169	130920

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of  $k = 2$ .

### Characterization of CRM by two independent methods    Characterization of CRM by one method

#### Characterization of CRM/RM by Two Methods

Certified Value,  $X_{CRM/RM}$ , where two methods of characterization are used  
is the weighted mean of the two results:

$$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$$

$X_a$  = mean of Assay Method A with standard uncertainty  $u_{char\ a}$

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$$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2)$$

$$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k(u_{char\ a\&b}^2 + u_{bb}^2 + u_{ts}^2 + u_{its}^2)^{1/2}$$

$k$  = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2(u_{char\ a})^2 + (w_b)^2(u_{char\ b})^2]^{1/2}$  where  $u_{char\ a}$  and  $u_{char\ b}$  are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{its}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

#### Characterization of CRM/RM by One Method

Certified Value,  $X_{CRM/RM}$ , where one method of characterization is used is the mean of individual results:

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$$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k(u_{char\ a}^2 + u_{bb}^2 + u_{ts}^2 + u_{its}^2)^{1/2}$$

$k$  = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$  = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{ts}$  = long term stability standard uncertainty (storage)

$u_{its}$  = transport stability standard uncertainty

## 4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

### 4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

### 4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

### 4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

## 5.0 TRACE METALLIC IMPURITIES (TMI ) DETERMINED BY ICP-MS AND ICP-OES ( $\mu\text{g/mL}$ )

N/A

## 6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	ICP Assay	3134	130418
Mo	Calculated		See Sec. 4.2
Sb	ICP Assay	3102a	140911
Si	ICP Assay	3150	130912
Sn	ICP Assay	3161a	070330
Sn	Calculated		See Sec. 4.2
Ti	ICP Assay	3162a	130925
Ti	Calculated		See Sec. 4.2
W	ICP Assay	3163	140606
Zr	ICP Assay	3169	130920

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of  $k = 2$ .

#### Characterization of CRM by two independent methods   Characterization of CRM by one method

##### Characterization of CRM/RM by Two Methods

Certified Value,  $X_{CRM/RM}$ , where two methods of characterization are used is the weighted mean of the two results:

$$X_{CRM/RM} = [(w_a) (X_a) + (w_b) (X_b)]$$

$X_a$  = mean of Assay Method A with standard uncertainty  $u_{char\ a}$

$X_b$  = mean of Assay Method B with standard uncertainty  $u_{char\ b}$

$w_a$  and  $w_b$  = the weighting factors for each method calculated using the inverse square of the variance:

$$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2)$$

$$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2)$$

$$CRM/RM Expanded Uncertainty (\pm) = U_{CRM/RM} = k (u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$$

$k$  = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2 (u_{char\ a})^2 + (w_b)^2 (u_{char\ b})^2]^{1/2}$  where  $u_{char\ a}$  and  $u_{char\ b}$  are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{lts}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

##### Characterization of CRM/RM by One Method

Certified Value,  $X_{CRM/RM}$ , where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = \text{mean of Assay Method A with standard uncertainty } u_{char\ a}$$

$$CRM/RM Expanded Uncertainty (\pm) = U_{CRM/RM} = k (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$$

$k$  = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a} = \sqrt{\sum \text{errors}^2}$  where  $\text{errors}$  include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{lts}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

#### 4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

##### 4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

##### 4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

##### 4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

#### 5.0 TRACE METALLIC IMPURITIES (TMI ) DETERMINED BY ICP-MS AND ICP-OES ( $\mu\text{g/mL}$ )

N/A

#### 6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

#### 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

##### 7.1 Storage and Handling Recommendations

- Store between approximately  $4^\circ - 30^\circ \text{ C}$  while in sealed TCT bag.
- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.
- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between  $4^\circ - 24^\circ \text{ C}$  to minimize the effects of transpiration. Use at  $20^\circ \pm 4^\circ \text{ C}$  to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.
- For more information, visit [www.inorganicventures.com/TCT](http://www.inorganicventures.com/TCT)

**HF Note:** This standard should not be prepared or stored in glass.

#### 8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

#### 9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

#### 10.0 QUALITY STANDARD DOCUMENTATION

##### 10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

##### 10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

##### 10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

##### 10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

##### 10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030; Fax: 540.585.3012; [inorganicventures.com](http://inorganicventures.com); [info@inorganicventures.com](mailto:info@inorganicventures.com)

#### 11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

**11.1 Certification Issue Date**

October 26, 2017

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

**11.2 Lot Expiration Date**

**- October 26, 2020**

- The date after which this CRM/RM should not be used.
- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

**11.3 Period of Validity**

- Sealed TCT Bag Open Date: \_\_\_\_\_

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

**12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS****Certificate Approved By:**

Michael Booth  
Supervisor, Quality Control

**Certifying Officer:**

Paul Gaines  
CEO, Senior Technical Director



Reagent

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**ICP STD A\_00002**



Rec 9/20/19  
5829485

## CERTIFICATE OF ANALYSIS

Multi-Element Aqueous CRM

Product #: TA-CM-MAR19-IRV1

Irvine Custom Mix

Lot #: 10099542-4

Matrix: 2% HNO<sub>3</sub>

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
Ag	99.98 ± 1.00 µg/mL	Cr	200.1 ± 1.0 µg/mL	P	199.9 ± 1.0 µg/mL
Al	200.0 ± 1.0 µg/mL	Cu	200.0 ± 1.0 µg/mL	Pb	200.0 ± 1.0 µg/mL
As	199.9 ± 1.0 µg/mL	Fe	200.0 ± 1.0 µg/mL	Se	200.1 ± 1.0 µg/mL
B	200.0 ± 1.0 µg/mL	K	2000 ± 10 µg/mL	Sr	199.9 ± 1.0 µg/mL
Ba	200.0 ± 1.0 µg/mL	Li	200.0 ± 1.0 µg/mL	Tl	200.1 ± 1.0 µg/mL
Be	200.1 ± 1.0 µg/mL	Mg	1000 ± 10 µg/mL	V	200.0 ± 1.0 µg/mL
Ca	999.9 ± 5.0 µg/mL	Mn	200.0 ± 1.0 µg/mL	Zn	200.2 ± 1.0 µg/mL
Cd	200.0 ± 1.0 µg/mL	Na	2000 ± 10 µg/mL		
Co	200.0 ± 1.0 µg/mL	Ni	200.1 ± 1.0 µg/mL		

### Source Material Lot# Chart

Element	Source Material Lot#	Element	Source Material Lot#	Element	Source Material Lot#
Ag	983032	Cr	880115	P	122196R
Al	169484	Cu	982824	Pb	168223
As	166531	Fe	998527	Se	929078
B	982186	K	983959	Sr	976606
Ba	150283R	Li	983034	Tl	983036
Be	989234	Mg	116835	V	983037
Ca	150704	Mn	985851	Zn	979871
Cd	173171	Na	994710		
Co	979870	Ni	752769		

**Intended Use:** This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

**Certification & Traceability:** This CRM was manufactured, processed, and certified under a quality management system that is registered/accredited to ISO 9001, ISO 17034, and ISO/IEC 17025. This CRM was prepared to the certified concentrations shown above by gravimetric methods, using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to **NIST SRMs (see reverse side)**. The solution was stabilized using high purity nitric acid (HNO<sub>3</sub>), and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against **NIST SRMs (see reverse side)**. The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

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**Health and Safety Information:** Refer to the Safety Data Sheet (SDS).

**Homogeneity:** This solution was determined to be homogeneous by procedures consistent with the requirements of ISO Guide 34 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with QSP 6-13 Assessment of Homogeneity and Stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

**Quality Manual Rev:** No. 5, 03/01/2013

**Further Information:** Please contact CPI International for further information about this CRM.

**Quality Certifications:** This CRM was prepared under a quality management system that is registered/accredited to the following:

- ISO 9001 – Quality Management Systems – Requirements (TUV NORD Cert. No. 44 100 16560231)
- ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories (A2LA Cert. No. 2848.01)
- ISO Guide 34 – General Requirements for the Competence of Reference Material Producers (A2LA Cert. No. 2848.02)
  - ISO Guide 34 references additional requirements specified in ISO Guide 31 and ISO Guide 35.

**This CRM is traceable to the following NIST SRMs:**

Analyte	Aq. SRM	MO SRM		Analyte	Aq. SRM	MO SRM		Analyte	Aq. SRM	MO SRM
Ag	3151	1077a		Hf	3122	—		S	3154	2770
Al	3101a	1075a		Hg	3133	3133		Sb	3102a	3102a
As	3103a	3103a		Ho	3123a	—		Sc	3148a	3148a
Au	3121	—		In	3124a	3124a		Se	3149	3149
B	3107	3107		K	3141a	3141a		Si	3150	1066a
Ba	3104a	1051b		La	3127a	3127a		Sm	3147a	—
Be	3105a	3105a		Li	3129a	3129a		Sn	3161a	1057b
Bi	3106	3106		Lu	3130a	—		SO <sub>4</sub> <sup>2-</sup>	3181	—
Br	3184	—		Mg	3131a	3131a		Sr	3153a	3153a
Ca	3109a	3109a		Mn	3132	3132		Ta	3155	—
Cd	3108	1053a		Mo	3134	3134		Tb	3157a	—
Ce	3110	3110		Na	3152a	3152a		Te	3156	—
Cl	3182	1818a		Nb	3137	—		Th	3159	—
Co	3113	3113		Nd	3135a	—		Ti	3162a	3162a
Cr	3112a	1078b		Ni	3136	1065b		Tl	3158	3158
Cs	3111a	—		NO <sub>3</sub> <sup>-</sup>	3185	—		Tm	3160a	—
Cu	3114	1080a		P	3139a	3139a		U	3164	—
Dy	3115a	—		Pb	3128	3128		V	3165	1052b
Er	3116a	—		Pd	3138	—		W	3163	3163
Eu	3117a	—		PO <sub>4</sub> <sup>3-</sup>	3186	—		Y	3167a	3167a
F	3183	—		Pr	3142a	—		Yb	3166a	—
Fe	3126a	1079b		Pt	3140	3140		Zn	3168a	3168a
Ga	3119a	—		Rb	3145a	—		Zr	3169	3169
Gd	3118a	—		Re	3143	—				
Ge	3120a	—		Rh	3144	3144				

Reagent

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**ICP STD A\_00003**



## CERTIFICATE OF ANALYSIS

Multi-Element Aqueous CRM

Product #: TA-CM-MAR19-IRV1

Irvine Custom Mix

Lot #: 10099542-5

Matrix: 2% HNO<sub>3</sub>

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
Ag	99.99 ± 1.00 µg/mL	Cr	200.0 ± 1.0 µg/mL	P	200.0 ± 1.0 µg/mL
Al	200.0 ± 1.0 µg/mL	Cu	200.0 ± 1.0 µg/mL	Pb	200.0 ± 1.0 µg/mL
As	200.0 ± 1.0 µg/mL	Fe	200.0 ± 1.0 µg/mL	Se	200.0 ± 1.0 µg/mL
B	200.0 ± 1.0 µg/mL	K	2000 ± 10 µg/mL	Sr	200.0 ± 1.0 µg/mL
Ba	200.0 ± 1.0 µg/mL	Li	200.0 ± 1.0 µg/mL	Tl	200.0 ± 1.0 µg/mL
Be	200.0 ± 1.0 µg/mL	Mg	1000 ± 10 µg/mL	V	200.0 ± 1.0 µg/mL
Ca	999.8 ± 5.0 µg/mL	Mn	200.0 ± 1.0 µg/mL	Zn	200.0 ± 1.0 µg/mL
Cd	200.0 ± 1.0 µg/mL	Na	2000 ± 10 µg/mL		
Co	200.0 ± 1.0 µg/mL	Ni	200.0 ± 1.0 µg/mL		

### Source Material Lot# Chart

Element	Source Material Lot#	Element	Source Material Lot#	Element	Source Material Lot#
Ag	983032	Cr	880115	P	122196R
Al	992536	Cu	982824	Pb	168223
As	166531	Fe	998527	Se	929078
B	982186	K	983959	Sr	976606
Ba	150283R	Li	983034	Tl	983036
Be	989234	Mg	116835	V	983037
Ca	150704	Mn	985851	Zn	979871
Cd	173171	Na	994710		
Co	161695	Ni	752769		

**Intended Use:** This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

**Certification & Traceability:** This CRM was manufactured, processed, and certified under a quality management system that is registered/accredited to ISO 9001, ISO 17034, and ISO/IEC 17025. This CRM was prepared to the certified concentrations shown above by gravimetric methods, using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to **NIST SRMs (see reverse side)**. The solution was stabilized using high purity nitric acid (HNO<sub>3</sub>), and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against **NIST SRMs (see reverse side)**. The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

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**ICP STD B\_00002**

Rec 9/6/19  
5829490



## CERTIFICATE OF ANALYSIS

Multi-Element Aqueous CRM

Product #: TA-CM-MAR19-IRV2

Irvine Custom Mix

Lot #: 10099542-3

Matrix: 2% HNO<sub>3</sub>/tr. HF

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
Mo	200.0 ± 2.0 µg/mL	Sn	200.1 ± 2.0 µg/mL	Zr	200.0 ± 2.0 µg/mL
Sb	200.0 ± 2.0 µg/mL	Ti	199.9 ± 2.0 µg/mL		
Si	999.9 ± 10.0 µg/mL	W	199.9 ± 2.0 µg/mL		

### Source Material Lot# Chart

Element	Source Material Lot#	Element	Source Material Lot#	Element	Source Material Lot#
Mo	175215	Sn	171360	Zr	172925
Sb	978317	Ti	161694		
Si	977647	W	997482		

**Intended Use:** This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

**Certification & Traceability:** This CRM was manufactured, processed, and certified under a quality management system that is registered/accredited to ISO 9001, ISO 17034, and ISO/IEC 17025. This CRM was prepared to the certified concentrations shown above by gravimetric methods, using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to **NIST SRMs (see reverse side)**. The solution was stabilized using high purity nitric acid (HNO<sub>3</sub>), trace hydrofluoric acid (HF) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against **NIST SRMs (see reverse side)**. The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

**Instructions for Use:** We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

**Period of Validity:** CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau, Certifying Officer

August 29, 2019

Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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**ICP STD B\_00003**



## CERTIFICATE OF ANALYSIS

Multi-Element Aqueous CRM

Product #: TA-CM-MAR19-IRV2

Irvine Custom Mix

Lot #: 10099542-6

Matrix: 2% HNO<sub>3</sub>/tr. HF

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
Mo	200.0 ± 2.0 µg/mL	Sn	200.0 ± 2.0 µg/mL	Zr	200.0 ± 2.0 µg/mL
Sb	200.0 ± 2.0 µg/mL	Tl	200.0 ± 2.0 µg/mL		
Si	1000 ± 10 µg/mL	W	200.0 ± 2.0 µg/mL		

### Source Material Lot# Chart

Element	Source Material Lot#	Element	Source Material Lot#	Element	Source Material Lot#
Mo	175215	Sn	1000985	Zr	999924
Sb	978317	Tl	161694		
Si	977647	W	997482		

**Intended Use:** This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

**Certification & Traceability:** This CRM was manufactured, processed, and certified under a quality management system that is registered/accredited to ISO 9001, ISO 17034, and ISO/IEC 17025. This CRM was prepared to the certified concentrations shown above by gravimetric methods, using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to **NIST SRMs (see reverse side)**. The solution was stabilized using high purity nitric acid (HNO<sub>3</sub>), trace hydrofluoric acid (HF) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against **NIST SRMs (see reverse side)**. The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

**Instructions for Use:** We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

**Period of Validity:** CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

\_\_\_\_\_  
Chuck Goudreau, Certifying Officer

October 11, 2019  
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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Reagent

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**ICPMS STD AG\_00002**



5888091

## CERTIFICATE OF ANALYSIS

Single-Element Aqueous CRM

Product #: TA-1000511

SE Std Silver (Ag) – 1000 µg/mL

Lot #: 975475-22

Matrix: 5% HNO<sub>3</sub>

Element	Certified Concentration & Uncertainty
Ag	996 ± 3 µg/mL (w/v)
	987 ± 3 µg/g (w/w)

**Intended Use:** This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

**Certification & Traceability:** This CRM was manufactured, processed, and certified under a quality management system that is registered/accredited to ISO 9001, ISO 17034, and ISO/IEC 17025. This CRM was prepared to a nominal concentration of 1000 µg/mL by gravimetric methods using 99.999% pure silver (Ag) metal dissolved in high purity nitric acid (HNO<sub>3</sub>) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration and uncertainty were determined using the "High Performance ICP-OES" protocol developed by NIST, and both the certified concentration and uncertainty values are traceable to **NIST SRM 3151, lot #992212**. The uncertainty associated with the certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

**Indicative Values:** ICP-MS was used to determine trace metal concentrations for this product (nd = not determined).

Trace Concentrations (µg/L)													
Ag	MAJOR	Co	<0.5	Ge	<0.5	Lu	<0.2	P	<100	Sb	<0.5	Te	<1
Al	<2	Cs	<1	Hf	<0.2	Mg	<5	Pb	2	Sc	<5	Ti	<2
As	<2	Cr	<0.5	Hg	3	Mn	<1	Pd	<0.5	Se	<2	Tl	<0.5
Au	2	Cu	9	Ho	<0.2	Mo	<0.5	Pr	<0.2	Si	<100	Tm	<0.2
B	<5	Dy	<0.2	In	nd	Na	<25	Pt	<0.5	Sm	<0.2	V	<1
Ba	<1	Er	<0.2	Ir	<0.2	Nb	<0.5	Rb	<0.5	Sn	<0.5	W	<0.5
Bi	<0.2	Eu	<0.2	K	<25	Nd	<0.2	Re	<0.2	Sr	<1	Y	<0.5
Ca	<25	Fe	<10	La	<0.5	Ni	<2	Rh	<0.5	Ta	<0.5	Yb	<0.2
Cd	<0.5	Ga	<0.5	Li	<2	Os	2	Ru	<0.5	Tb	<0.5	Zn	<2
Ce	<0.2	Gd	<0.2										

**Instructions for Use:** We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

**Period of Validity:** CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau, Certifying Officer

April 4, 2019

Certification Date

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1A0881-2

**Health and Safety Information:** Refer to the Safety Data Sheet (SDS).

**Homogeneity:** This solution was determined to be homogeneous by procedures consistent with the requirements of ISO Guide 34 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with QSP 6-13 Assessment of Homogeneity and Stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

**Quality Manual Rev:** No. 5, 03/01/2013

**Further Information:** Please contact CPI International for further information about this CRM.

**Quality Certifications:** This CRM was prepared under a quality management system that is registered/accredited to the following:

- ISO 9001 – Quality Management Systems – Requirements (TUV NORD Cert. No. 44 100 16560231)
- ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories (A2LA Cert. No. 2848.01)
- ISO Guide 34 – General Requirements for the Competence of Reference Material Producers (A2LA Cert. No. 2848.02)
  - ISO Guide 34 references additional requirements specified in ISO Guide 31 and ISO Guide 35.

Reagent

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**ICPMS STD AL\_00001**



5158486

## CERTIFICATE OF ANALYSIS

Single-Element Aqueous CRM

Product #: TA-10M11

SE Std Aluminum (Al) – 10,000 µg/mL

Lot #: 169484-20

Matrix: 5% HNO<sub>3</sub>

Element	Certified Concentration & Uncertainty
Al	10,030 ± 20 µg/mL (w/v)
	9428 ± 22 µg/g (w/w)

**Intended Use:** This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

**Certification & Traceability:** This CRM was manufactured, processed, and certified under a quality management system that is registered/accredited to ISO 9001, ISO 17034, and ISO/IEC 17025. This CRM was prepared to a nominal concentration of 10,000 µg/mL by gravimetric methods using 99.999% pure aluminum nitrate [Al(NO<sub>3</sub>)<sub>3</sub>] dissolved in high purity nitric acid (HNO<sub>3</sub>) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration and uncertainty were determined using the "High Performance ICP-OES" protocol developed by NIST, and both the certified concentration and uncertainty values are traceable to NIST SRM 3101a, lot #140903. The uncertainty associated with the certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

**Indicative Values:** ICP-MS was used to determine trace metal concentrations for this product (nd = not determined).

Trace Concentrations (µg/L)													
Ag	<5	Co	<10	Ge	<5	Mg	<50	Pd	<5	Si	<1000	V	<10
Al	MAJOR	Cs	<5	Hf	<2	Mn	<10	Pr	<2	Sm	<2	W	16
As	<20	Cr	89	Hg	<5	Mo	<5	Pt	<5	Sn	<5	Y	<5
Au	<5	Cu	<10	Ho	<2	Na	3315	Rb	<5	Sr	<10	Yb	<2
B	<50	Dy	<2	In	nd	Nb	<5	Re	<2	Ta	<5	Zn	30
Ba	<10	Er	<2	Ir	<2	Nd	<2	Rh	<5	Tb	<5		
Bi	<2	Eu	<2	K	<250	Ni	<20	Ru	<5	Te	<10		
Ca	330	Fe	890	La	<5	Os	<5	Sb	<5	Tl	<20		
Cd	<5	Ga	681	Li	<20	P	<1000	Sc	<50	Tl	10		
Ce	<2	Gd	<2	Lu	<2	Pb	<10	Se	<20	Tm	<2		

**Instructions for Use:** We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

**Period of Validity:** CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau, Certifying Officer

October 22, 2018

Certification Date

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**Health and Safety Information:** Refer to the Safety Data Sheet (SDS).

**Homogeneity:** This solution was determined to be homogeneous by procedures consistent with the requirements of ISO Guide 34 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with QSP 6-13 Assessment of Homogeneity and Stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

**Quality Manual Rev:** No. 5, 03/01/2013

**Further Information:** Please contact CPI International for further information about this CRM.

**Quality Certifications:** This CRM was prepared under a quality management system that is registered/accredited to the following:

- ISO 9001 – Quality Management Systems – Requirements (TUV NORD Cert. No. 44 100 16560231)
- ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories (A2LA Cert. No. 2848.01)
- ISO Guide 34 – General Requirements for the Competence of Reference Material Producers (A2LA Cert. No. 2848.02)
  - ISO Guide 34 references additional requirements specified in ISO Guide 31 and ISO Guide 35.

Reagent

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**ICPMS STD FE\_00001**



5158485

## CERTIFICATE OF ANALYSIS

Single-Element Aqueous CRM

Product #: TA-10M261

SE Std Iron (Fe) – 10,000 µg/mL

Lot #: 156651-59

Matrix: 5% HNO<sub>3</sub>

Element	Certified Concentration & Uncertainty
Fe	10,010 ± 40 µg/mL (w/v)
	9609 ± 34 µg/g (w/w)

**Intended Use:** This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

**Certification & Traceability:** This CRM was manufactured, processed, and certified under a quality management system that is registered/accredited to ISO 9001, ISO 17034, and ISO/IEC 17025. This CRM was prepared to a nominal concentration of 10,000 µg/mL by gravimetric methods using 99.999% pure iron nitrate nonahydrate [Fe(NO<sub>3</sub>)<sub>3</sub>] dissolved in high purity nitric acid (HNO<sub>3</sub>) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration and uncertainty were determined using the "High Performance ICP-OES" protocol developed by NIST, and both the certified concentration and uncertainty values are traceable to NIST SRM 3126a, lot #140812. The uncertainty associated with the certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

**Indicative Values:** ICP-MS was used to determine trace metal concentrations for this product (nd = not determined).

Trace Concentrations (µg/L)													
Ag	<5	Co	24	Ge	<5	Mg	<50	Pd	<5	Si	<1000	V	<10
Al	37	Cs	<5	Hf	<2	Mn	13	Pr	<2	Sm	<2	W	<5
As	<20	Cr	37	Hg	<5	Mo	<5	Pt	<5	Sn	<5	Y	<5
Au	<5	Cu	<10	Ho	<2	Na	<250	Rb	<5	Sr	<10	Yb	<2
B	<50	Dy	<2	In	nd	Nb	<5	Re	<2	Ta	<5	Zn	<20
Ba	27	Er	<2	Ir	<2	Nd	<2	Rh	<5	Tb	<5		
Bi	<2	Eu	<2	K	<250	Ni	<20	Ru	<5	Te	<10		
Ca	<250	Fe	MAJOR	La	<5	Os	<5	Sb	<5	Ti	<20		
Cd	<5	Ga	<5	Li	<20	P	<1000	Sc	<50	Tl	<5		
Ce	<2	Gd	<2	Lu	<2	Pb	<10	Se	<20	Tm	<2		

**Instructions for Use:** We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

**Period of Validity:** CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

\_\_\_\_\_  
Chuck Goudreau, Certifying Officer

October 22, 2018  
Certification Date

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**Health and Safety Information:** Refer to the Safety Data Sheet (SDS).

**Homogeneity:** This solution was determined to be homogeneous by procedures consistent with the requirements of ISO Guide 34 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with QSP 6-13 Assessment of Homogeneity and Stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

**Quality Manual Rev:** No. 5, 03/01/2013

**Further Information:** Please contact CPI International for further information about this CRM.

**Quality Certifications:** This CRM was prepared under a quality management system that is registered/accredited to the following:

- ISO 9001 – Quality Management Systems – Requirements (TUV NORD Cert. No. 44 100 16560231)
- ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories (A2LA Cert. No. 2848.01)
- ISO Guide 34 – General Requirements for the Competence of Reference Material Producers (A2LA Cert. No. 2848.02)
  - ISO Guide 34 references additional requirements specified in ISO Guide 31 and ISO Guide 35.



## CERTIFICATE OF ANALYSIS

Single-Element Aqueous CRM

Product #: TA-10M261

**SE Std Iron (Fe) – 10,000 µg/mL**

Product Lot #: 156651-59

Matrix: 5% HNO<sub>3</sub>

Source Material Lot #: FED122015A1

Revised: 5/31/2019

Element	Certified Concentration & Uncertainty
Fe	10,010 ± 40 µg/mL (w/v)
	9609 ± 34 µg/g (w/w)

**Intended Use:** This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

**Certification & Traceability:** This CRM was manufactured, processed, and certified under a quality management system that is registered/accredited to ISO 9001, ISO 17034, and ISO/IEC 17025. This CRM was prepared to a nominal concentration of 10,000 µg/mL by gravimetric methods using 99.999% pure iron nitrate nonahydrate [Fe(NO<sub>3</sub>)<sub>3</sub>] dissolved in high purity nitric acid (HNO<sub>3</sub>) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration and uncertainty were determined using the "High Performance ICP-OES" protocol developed by NIST, and both the certified concentration and uncertainty values are traceable to NIST SRM 3126a, lot #140812. The uncertainty associated with the certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

**Indicative Values:** ICP-MS was used to determine trace metal concentrations for this product (nd = not determined).

Trace Concentrations (µg/L)													
Ag	<5	Co	24	Ge	<5	Mg	<50	Pd	<5	Si	<1000	V	<10
Al	37	Cs	<5	Hf	<2	Mn	13	Pr	<2	Sm	<2	W	<5
As	<20	Cr	37	Hg	<5	Mo	<5	Pt	<5	Sn	<5	Y	<5
Au	<5	Cu	<10	Ho	<2	Na	<250	Rb	<5	Sr	<10	Yb	<2
B	<50	Dy	<2	In	nd	Nb	<5	Re	<2	Ta	<5	Zn	<20
Ba	27	Er	<2	Ir	<2	Nd	<2	Rh	<5	Tb	<5		
Bi	<2	Eu	<2	K	<250	Ni	<20	Ru	<5	Te	<10		
Ca	<250	Fe	MAJOR	La	<5	Os	<5	Sb	<5	Ti	<20		
Cd	<5	Ga	<5	Li	<20	P	<1000	Sc	<50	Tl	<5		
Ce	<2	Gd	<2	Lu	<2	Pb	<10	Se	<20	Tm	<2		

**Instructions for Use:** We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

**Period of Validity:** CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

\_\_\_\_\_  
**Chuck Goudreau, Certifying Officer**

See Exp. Date on Container

Certification Date

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**Health and Safety Information:** Refer to the Safety Data Sheet (SDS).

**Homogeneity:** This solution was determined to be homogeneous by procedures consistent with the requirements of ISO Guide 34 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with QSP 6-13 Assessment of Homogeneity and Stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

**Quality Manual Rev:** No. 5, 03/01/2013

**Further Information:** Please contact CPI International for further information about this CRM.

**Quality Certifications:** This CRM was prepared under a quality management system that is registered/accredited to the following:

- ISO 9001 – Quality Management Systems – Requirements (TUV NORD Cert. No. 44 100 16560231)
- ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories (A2LA Cert. No. 2848.01)
- ISO Guide 34 – General Requirements for the Competence of Reference Material Producers (A2LA Cert. No. 2848.02)
  - ISO Guide 34 references additional requirements specified in ISO Guide 31 and ISO Guide 35.

Reagent

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**ICPMS STD NA\_00001**



5158502

## CERTIFICATE OF ANALYSIS

Single-Element Aqueous CRM

Product #: TA-10M521

**SE Std Sodium (Na) – 10,000 µg/mL**

Lot #: 752887-20

Matrix: 5% HNO<sub>3</sub>

Element	Certified Concentration & Uncertainty
Na	10,070 ± 20 µg/mL (w/v)
	9771 ± 24 µg/g (w/w)

**Intended Use:** This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

**Certification & Traceability:** This CRM was manufactured, processed, and certified under a quality management system that is registered/accredited to ISO 9001, ISO 17034, and ISO/IEC 17025. This CRM was prepared to a nominal concentration of 10,000 µg/mL by gravimetric methods using 99.997% pure sodium carbonate (Na<sub>2</sub>CO<sub>3</sub>) dissolved in high purity nitric acid (HNO<sub>3</sub>) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration and uncertainty were determined using the "High Performance ICP-OES" protocol developed by NIST, and both the certified concentration and uncertainty values are traceable to NIST SRM 3152a, lot #120715. The uncertainty associated with the certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

**Indicative Values:** ICP-MS was used to determine trace metal concentrations for this product (nd = not determined).

Trace Concentrations (µg/L)														
Ag	<5	Co	<10	Ge	<5	Mg	<50	Pd	<5	Si	<1000	V	<10	
Al	<20	Cs	11	Hf	<2	Mn	<10	Pr	<2	Sm	<2	W	<5	
As	<20	Cr	<5	Hg	<5	Mo	<5	Pt	<5	Sn	<5	Y	<5	
Au	<5	Cu	<10	Ho	<2	Na	MAJOR	Rb	70	Sr	14	Yb	<2	
B	<50	Dy	<2	In	nd	Nb	<5	Re	<2	Ta	<5	Zn	<20	
Ba	26	Er	<2	Ir	<2	Nd	<2	Rh	<5	Tb	<5			
Bi	<2	Eu	<2	K	<250	Ni	<20	Ru	<5	Te	<10			
Ca	<250	Fe	<100	La	<5	Os	<5	Sb	<5	Ti	<20			
Cd	<5	Ga	<5	Li	<20	P	<1000	Sc	<50	Tl	<5			
Ce	<2	Gd	<2	Lu	<2	Pb	<10	Se	<20	Tm	<2			

**Instructions for Use:** We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

**Period of Validity:** CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau, Certifying Officer

October 22, 2018

Certification Date

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**Health and Safety Information:** Refer to the Safety Data Sheet (SDS).

**Homogeneity:** This solution was determined to be homogeneous by procedures consistent with the requirements of ISO Guide 34 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with QSP 6-13 Assessment of Homogeneity and Stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

**Quality Manual Rev:** No. 5, 03/01/2013

**Further Information:** Please contact CPI International for further information about this CRM.

**Quality Certifications:** This CRM was prepared under a quality management system that is registered/accredited to the following:

- ISO 9001 – Quality Management Systems – Requirements (TUV NORD Cert. No. 44 100 16560231)
- ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories (A2LA Cert. No. 2848.01)
- ISO Guide 34 – General Requirements for the Competence of Reference Material Producers (A2LA Cert. No. 2848.02)
  - ISO Guide 34 references additional requirements specified in ISO Guide 31 and ISO Guide 35.

Reagent

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**ICPMS STD U\_00001**



5158504

## CERTIFICATE OF ANALYSIS

Single-Element Aqueous CRM

Product #: TA-1000641

SE Std Uranium (U) – 1000 µg/mL

Lot #: 984257-3

Matrix: 5% HNO<sub>3</sub>

Element	Certified Concentration & Uncertainty
U	998 ± 3 µg/mL (w/v)
	993 ± 3 µg/g (w/w)

**Intended Use:** This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

**Certification & Traceability:** This CRM was manufactured, processed, and certified under a quality management system that is registered/accredited to ISO 9001, ISO 17034, and ISO/IEC 17025. This CRM was prepared to a nominal concentration of 1000 µg/mL by gravimetric methods using Uranium (VI) Nitrate Hexahydrate dissolved in high purity nitric acid (HNO<sub>3</sub>) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration and uncertainty were determined using the "High Performance ICP-OES" protocol developed by NIST, and both the certified concentration and uncertainty values are traceable to **NIST SRM 3164, lot #080521**. The uncertainty associated with the certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

**Indicative Values:** ICP-MS was used to determine trace metal concentrations for this product (nd = not determined).

### Trace Concentrations (µg/L)

Ag	<0.5	Co	<1	Ge	<0.5	Lu	<0.2	P	<100	Sb	<0.5	Te	<1
Al	<2	Cs	<0.5	Hf	<0.2	Mg	<5	Pb	<1	Sc	<5	Ti	<2
As	<2	Cr	<0.5	Hg	<0.5	Mn	<1	Pd	<0.5	Se	<2	Tl	<0.5
Au	<0.5	Cu	<1	Ho	<0.2	Mo	<0.5	Pr	<0.2	Si	<100	Tm	<0.2
B	<5	Dy	<0.2	In	nd	Na	<25	Pt	<0.5	Sm	<0.2	V	<1
Ba	<1	Er	<0.2	Ir	<0.2	Nb	<0.5	Rb	<0.5	Sn	<0.5	W	<0.5
Bi	<0.2	Eu	<0.2	K	<25	Nd	<0.2	Re	<0.2	Sr	<1	Y	<0.5
Ca	<25	Fe	<10	La	<0.5	Ni	<2	Rh	<0.5	Ta	<0.5	Yb	<0.2
Cd	<0.5	Ga	<0.5	Li	<2	Os	<0.5	Ru	<0.5	Tb	<0.5	Zn	<2
Ce	<0.2	Gd	<0.2										

**Instructions for Use:** We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

**Period of Validity:** CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau, Certifying Officer

October 22, 2018

Certification Date

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### Europe

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**Health and Safety Information:** Refer to the Safety Data Sheet (SDS).

**Homogeneity:** This solution was determined to be homogeneous by procedures consistent with the requirements of ISO Guide 34 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with QSP 6-13 Assessment of Homogeneity and Stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

**Quality Manual Rev:** No. 5, 03/01/2013

**Further Information:** Please contact CPI International for further information about this CRM.

**Quality Certifications:** This CRM was prepared under a quality management system that is registered/accredited to the following:

- ISO 9001 – Quality Management Systems – Requirements (TUV NORD Cert. No. 44 100 16560231)
- ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories (A2LA Cert. No. 2848.01)
- ISO Guide 34 – General Requirements for the Competence of Reference Material Producers (A2LA Cert. No. 2848.02)
  - ISO Guide 34 references additional requirements specified in ISO Guide 31 and ISO Guide 35.

Reagent

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**ICPMS STD ZN\_00001**



5158481

## CERTIFICATE OF ANALYSIS

Single-Element Aqueous CRM

Product #: TA-1000681

SE Std Zinc (Zn) – 1000 µg/mL

Lot #: 166918-115

Matrix: 5% HNO<sub>3</sub>

Element	Certified Concentration & Uncertainty
Zn	997 ± 3 µg/mL (w/v)
	991 ± 3 µg/g (w/w)

**Intended Use:** This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

**Certification & Traceability:** This CRM was manufactured, processed, and certified under a quality management system that is registered/accredited to ISO 9001, ISO 17034, and ISO/IEC 17025. This CRM was prepared to a nominal concentration of 1000 µg/mL by gravimetric methods using 99.9999% pure zinc (Zn) metal dissolved in high purity nitric acid (HNO<sub>3</sub>) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration and uncertainty were determined using the "High Performance ICP-OES" protocol developed by NIST, and both the certified concentration and uncertainty values are traceable to **NIST SRM 3168a, lot #120629**. The uncertainty associated with the certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

**Indicative Values:** ICP-MS was used to determine trace metal concentrations for this product (nd = not determined).

Trace Concentrations (µg/L)													
Ag	<0.5	Co	<1	Ge	<0.5	Mg	<5	Pd	<0.5	Si	<100	V	<1
Al	<2	Cs	<0.5	Hf	<0.2	Mn	<1	Pr	<0.2	Sm	<0.2	W	<0.5
As	32	Cr	<0.5	Hg	<0.5	Mo	<0.5	Pt	<0.5	Sn	<0.5	Y	<0.5
Au	<0.5	Cu	<1	Ho	<0.2	Na	<25	Rb	<0.5	Sr	<1	Yb	<0.2
B	<5	Dy	<0.2	In	nd	Nb	<0.5	Re	<0.2	Ta	<0.5	Zn	MAJOR
Ba	<1	Er	<0.2	Ir	<0.2	Nd	<0.2	Rh	<0.5	Tb	<0.5		
Bi	<0.2	Eu	<0.2	K	<25	Ni	<2	Ru	<0.5	Te	<1		
Ca	<25	Fe	<10	La	<0.5	Os	<0.5	Sb	<0.5	Ti	<2		
Cd	<0.5	Ga	<0.5	Li	<2	P	<100	Sc	<5	Tl	<0.5		
Ce	<0.2	Gd	<0.2	Lu	<0.2	Pb	3	Se	<2	Tm	<0.2		

**Instructions for Use:** We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

**Period of Validity:** CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau, Certifying Officer

October 22, 2018

Certification Date

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**Health and Safety Information:** Refer to the Safety Data Sheet (SDS).

**Homogeneity:** This solution was determined to be homogeneous by procedures consistent with the requirements of ISO Guide 34 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with QSP 6-13 Assessment of Homogeneity and Stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

**Quality Manual Rev:** No. 5, 03/01/2013

**Further Information:** Please contact CPI International for further information about this CRM.

**Quality Certifications:** This CRM was prepared under a quality management system that is registered/accredited to the following:

- ISO 9001 – Quality Management Systems – Requirements (TUV NORD Cert. No. 44 100 16560231)
- ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories (A2LA Cert. No. 2848.01)
- ISO Guide 34 – General Requirements for the Competence of Reference Material Producers (A2LA Cert. No. 2848.02)
  - ISO Guide 34 references additional requirements specified in ISO Guide 31 and ISO Guide 35.

Reagent

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**Iron\_00001**



Rec 7/18/19  
Open 9/3/19  
5794040

## CERTIFICATE OF ANALYSIS

Single-Element Aqueous CRM

Product #: TA-10M261

SE Std Iron (Fe) – 10,000 µg/mL

Lot #: 156651-59

Matrix: 5% HNO<sub>3</sub>

Element	Certified Concentration & Uncertainty
Fe	10,010 ± 40 µg/mL (w/w)
	9609 ± 34 µg/g (w/w)

**Intended Use:** This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

**Certification & Traceability:** This CRM was manufactured, processed, and certified under a quality management system that is registered/accredited to ISO 9001, ISO 17034, and ISO/IEC 17025. This CRM was prepared to a nominal concentration of 10,000 µg/mL by gravimetric methods using 99.999% pure iron nitrate nonahydrate [Fe(NO<sub>3</sub>)<sub>3</sub>] dissolved in high purity nitric acid (HNO<sub>3</sub>) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration and uncertainty were determined using the "High Performance ICP-OES" protocol developed by NIST, and both the certified concentration and uncertainty values are traceable to NIST SRM 3126a, lot #140812. The uncertainty associated with the certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

**Indicative Values:** ICP-MS was used to determine trace metal concentrations for this product (nd = not determined).

Trace Concentrations (µg/L)													
Ag	<5	Co	24	Ge	<5	Mg	<50	Pd	<5	Si	<1000	V	<10
Al	37	Cs	<5	Hf	<2	Mn	13	Pr	<2	Sm	<2	W	<5
As	<20	Cr	37	Hg	<5	Mo	<5	Pt	<5	Sn	<5	Y	<5
Au	<5	Cu	<10	Ho	<2	Na	<250	Rb	<5	Sr	<10	Yb	<2
B	<50	Dy	<2	In	nd	Nb	<5	Re	<2	Ta	<5	Zn	<20
Ba	27	Er	<2	Ir	<2	Nd	<2	Rh	<5	Tb	<5		
Bi	<2	Eu	<2	K	<250	Ni	<20	Ru	<5	Te	<10		
Ca	<250	Fe	MAJOR	La	<5	Os	<5	Sb	<5	Ti	<20		
Cd	<5	Ga	<5	Li	<20	P	<1000	Sc	<50	Tl	<5		
Ce	<2	Gd	<2	Lu	<2	Pb	<10	Se	<20	Tm	<2		

**Instructions for Use:** We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

**Period of Validity:** CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau, Certifying Officer

April 4, 2019

Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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Europe

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The Netherlands

Reagent

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**Maganesium\_00001**



Rec 7/18/19  
Open 9/9/19  
5794049

## CERTIFICATE OF ANALYSIS

Single-Element Aqueous CRM

Product #: TA-10M311

SE Std Magnesium (Mg) – 10,000 µg/mL

Lot #: 148250-105

Matrix: 5% HNO<sub>3</sub>

Element	Certified Concentration & Uncertainty
Mg	9921 ± 37 µg/mL (w/v)
	9456 ± 36 µg/g (w/w)

**Intended Use:** This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

**Certification & Traceability:** This CRM was manufactured, processed, and certified under a quality management system that is registered/accredited to ISO 9001, ISO 17034, and ISO/IEC 17025. This CRM was prepared to a nominal concentration of 10,000 µg/mL by gravimetric methods using 99.999% pure magnesium nitrate [Mg(NO<sub>3</sub>)<sub>2</sub>] dissolved in high purity nitric acid (HNO<sub>3</sub>) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration and uncertainty were determined using the "High Performance ICP-OES" protocol developed by NIST, and both the certified concentration and uncertainty values are traceable to NIST SRM 3131a, lot #140110. The uncertainty associated with the certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

**Indicative Values:** ICP-MS was used to determine trace metal concentrations for this product (nd = not determined).

Trace Concentrations (µg/L)													
Ag	8	Co	<10	Ge	<5	Mg	MAJOR	Pd	<5	Si	<1000	V	<10
Al	<20	Cs	<5	Hf	<2	Mn	32	Pr	<2	Sm	<2	W	<5
As	<20	Cr	<5	Hg	<5	Mo	7	Pt	<5	Sn	<5	Y	<5
Au	<5	Cu	<10	Ho	<2	Na	<250	Rb	<5	Sr	<10	Yb	<2
B	<50	Dy	<2	In	nd	Nb	<5	Re	<2	Ta	<5	Zn	<20
Ba	<10	Er	<2	Ir	<2	Nd	<2	Rh	<5	Tb	<5		
Bi	<2	Eu	<2	K	<250	Ni	<20	Ru	<5	Te	<10		
Ca	1440	Fe	<100	La	<5	Os	<5	Sb	<5	Ti	<20		
Cd	9	Ga	<5	Li	<20	P	<1000	Sc	<50	Tl	<5		
Ce	17	Gd	13	Lu	<2	Pb	<10	Se	<20	Tm	<2		

**Instructions for Use:** We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

**Period of Validity:** CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau, Certifying Officer

April 4, 2019

Certification Date

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### Europe

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The Netherlands



Rec 5/23/19  
open 9/10/19  
5796 Y01

## CERTIFICATE OF ANALYSIS

Single-Element Aqueous CRM

Product #: TA-1000391

SE Std Phosphorous (P) – 1000 µg/mL

Lot #: 978200-13

Matrix: 5% HNO<sub>3</sub>

Element	Certified Concentration & Uncertainty
P	1002 ± 4 µg/mL (w/v)
	997 ± 4 µg/g (w/w)

**Intended Use:** This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

**Certification & Traceability:** This CRM was manufactured, processed, and certified under a quality management system that is registered/accredited to ISO 9001, ISO 17034, and ISO/IEC 17025. This CRM was prepared to a nominal concentration of 1000 µg/mL by gravimetric methods using 99.7% pure phosphoric acid (H<sub>3</sub>PO<sub>4</sub>) dissolved in high purity nitric acid (HNO<sub>3</sub>) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration and uncertainty were determined using the "High Performance ICP-OES" protocol developed by NIST, and both the certified concentration and uncertainty values are traceable to NIST SRM 3139a, lot #060717. The uncertainty associated with the certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

**Indicative Values:** ICP-MS was used to determine trace metal concentrations for this product (nd = not determined).

### Trace Concentrations (µg/L)

Ag	<0.5	Co	<1	Ge	<0.5	Lu	<0.2	P	MAJOR	Sb	<0.5	Te	<1
Al	<2	Cs	<0.5	Hf	<0.2	Mg	<5	Pb	<1	Sc	<5	Ti	<2
As	<2	Cr	<0.5	Hg	<0.5	Mn	<1	Pd	<0.5	Se	<2	Tl	<0.5
Au	<0.5	Cu	<1	Ho	<0.2	Mo	<0.5	Pr	<0.2	Si	<100	Tm	<0.2
B	<5	Dy	<0.2	In	nd	Na	<25	Pt	<0.5	Sm	<0.2	V	<1
Ba	<1	Er	<0.2	Ir	<0.2	Nb	<0.5	Rb	<0.5	Sn	<0.5	W	<0.5
Bi	<0.2	Eu	<0.2	K	<25	Nd	<0.2	Re	<0.2	Sr	<1	Y	<0.5
Ca	<25	Fe	<10	La	<0.5	Ni	<2	Rh	<0.5	Ta	<0.5	Yb	<0.2
Cd	<0.5	Ga	<0.5	Li	<2	Os	<0.5	Ru	<0.5	Tb	<0.5	Zn	<2
Ce	<0.2	Gd	<0.2										

**Instructions for Use:** We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

**Period of Validity:** CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau, Certifying Officer

May 21, 2019

Certification Date

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The Netherlands



REC 7/18/19  
Open 9/9/19  
5794049

## CERTIFICATE OF ANALYSIS

Single-Element Aqueous CRM

Product #: TA-10M311

SE Std Magnesium (Mg) – 10,000 µg/mL

Lot #: 148250-105

Matrix: 5% HNO<sub>3</sub>

Element	Certified Concentration & Uncertainty
Mg	9921 ± 37 µg/mL (w/v)
	9456 ± 36 µg/g (w/w)

**Intended Use:** This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

**Certification & Traceability:** This CRM was manufactured, processed, and certified under a quality management system that is registered/accredited to ISO 9001, ISO 17034, and ISO/IEC 17025. This CRM was prepared to a nominal concentration of 10,000 µg/mL by gravimetric methods using 99.999% pure magnesium nitrate [Mg(NO<sub>3</sub>)<sub>2</sub>] dissolved in high purity nitric acid (HNO<sub>3</sub>) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration and uncertainty were determined using the "High Performance ICP-OES" protocol developed by NIST, and both the certified concentration and uncertainty values are traceable to **NIST SRM 3131a, lot #140110**. The uncertainty associated with the certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

**Indicative Values:** ICP-MS was used to determine trace metal concentrations for this product (nd = not determined).

Trace Concentrations (µg/L)														
Ag	8	Co	<10	Ge	<5	Mg	MAJOR	Pd	<5	Si	<1000	V	<10	
Al	<20	Cs	<5	Hf	<2	Mn	32	Pr	<2	Sm	<2	W	<5	
As	<20	Cr	<5	Hg	<5	Mo	7	Pt	<5	Sn	<5	Y	<5	
Au	<5	Cu	<10	Ho	<2	Na	<250	Rb	<5	Sr	<10	Yb	<2	
B	<50	Dy	<2	In	nd	Nb	<5	Re	<2	Ta	<5	Zn	<20	
Ba	<10	Er	<2	Ir	<2	Nd	<2	Rh	<5	Tb	<5			
Bi	<2	Eu	<2	K	<250	Ni	<20	Ru	<5	Te	<10			
Ca	1440	Fe	<100	La	<5	Os	<5	Sb	<5	Ti	<20			
Cd	9	Ga	<5	Li	<20	P	<1000	Sc	<50	Tl	<5			
Ce	17	Gd	13	Lu	<2	Pb	<10	Se	<20	Tm	<2			

**Instructions for Use:** We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

**Period of Validity:** CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

\_\_\_\_\_  
**Chuck Goudreau, Certifying Officer**

\_\_\_\_\_  
**April 4, 2019**  
**Certification Date**

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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Reagent

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**ME 10PPM HG2\_00018**

ID: 5688455



# SPEXertificate®

## Certificate of Reference Material

**Catalog Number:** PLHG2-1AY

**Lot No.** 24-68HGY

**Description:** 10 µg/mL Mercury

EXPIRES JULY 30, 2020

**Matrix:** 5% HNO<sub>3</sub>

This ASSURANCE® Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for inorganic spectroscopic instrumentation such as ICP-OES, DCP, AA, ICP-MS, and XRF. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

**Certified Value:** 10.0 µg/mL ±0.1 µg/mL

**Certified Value is Traceable to:** 3133\*

\* - indicates NIST SRM

† - indicates SPEX CertiPrep CRM (when NIST SRM is not available)

The CRM is prepared gravimetrically using high purity Mercury Metal, Lot# 03141E. The certified value listed is the average of values obtained by classical wet assay and ICP spectrometer analysis.

Refer to side 2 for details of measurement uncertainties.

**Classical Wet Assay:** 10.0 µg/mL

**Method:** This value was derived from dilution calculations of a Titrimetry analysis result of a Mercury concentrate. The concentrate was analyzed by EDTA titration using Ammonium Thiocyanate with Ferric Nitrate as indicator.

**Instrumental Analysis by ICP Spectrometer:** 9.99 µg/mL

### Uncertified Properties

**Density:** 1.024 g/mL @ 20.0°C

### Trace Metallic Impurities in the Actual Solution via ICP-MS Analysis:

Element	µg/mL										
Ag	<0.001	Cr	<0.001	Ho	<0.001	Nb	<0.001	Ru	<0.001	Th	<0.001
Al	0.001	Cs	<0.001	In	<0.001	Nd	<0.001	Sb	<0.001	Ti	<0.001
As	<0.001	Cu	<0.001	Ir	<0.001	Ni	<0.001	Sc	<0.001	Tl	<0.001
Au	<0.001	Dy	<0.001	K	0.001	P	<0.1	Se	<0.003	Tm	<0.001
B	<0.001	Er	<0.001	La	<0.001	Pb	<0.001	Si	<0.05	U	<0.001
Ba	<0.001	Eu	<0.001	Li	<0.001	Pd	<0.001	Sm	<0.001	V	<0.001
Be	<0.001	Fe	<0.001	Lu	<0.001	Pr	<0.001	Sn	<0.001	W	<0.001
Bi	<0.001	Ga	<0.001	Mg	<0.001	Pt	<0.001	Sr	<0.001	Y	<0.001
Ca	0.007	Gd	<0.001	Mn	<0.001	Rb	<0.001	Ta	<0.001	Yb	<0.001
Cd	<0.001	Ge	<0.001	Mo	<0.001	Re	<0.001	Tb	<0.001	Zn	<0.001
Ce	<0.001	Hf	<0.001	Na	0.001	Rh	<0.001	Te	<0.001	Zr	<0.001
Co	<0.001										

Balances are calibrated regularly with weight sets traceable to NIST #32856, #32867 and others. This CRM is guaranteed stable and accurate to +/- 1% of the certified value. This includes uncertainty components due to preparation, homogeneity by the most precise method, and short-term and long-term stability. This guarantee is valid for a period of one year from the date of certification only when the material is kept tightly capped and stored under ambient laboratory conditions.

Date of Certification: JUL -- 2019 Certifying Officer:

Katherine Cullinan  
Katherine Cullinan, QC Manager

Page 1 of 2  
Rev. 0

# Report of Certification

This Certified Reference Material (CRM) has been prepared and certified under an ISO 9001 (certified by DQS), ISO 17025 (accredited by A2LA) and ISO 17034 (accredited by A2LA) quality system consistent with the following guides:

- ISO 9001: Quality management systems – Requirements
- ISO/IEC 17025: General requirements for the competence of testing and calibration laboratories
- ISO 17034: General requirements for the competence of reference material producers
- ISO Guide 30: Reference Materials – Selected terms and definitions
- ISO Guide 31: Reference Materials – Contents of certificates and labels
- ISO Guide 35: Reference Materials – General and principals for certification
- Guide to the Expression of Uncertainty in Measurement, 2008
- EURACHEM/CITAC Guide: Qualifying Uncertainty in Analytical Measurement – Third Edition
- NIST Technical Note 1297

## Material Source:

All analytes and matrix materials are obtained and verified by SPEX CertiPrep from pre-qualified vendors as per ISO 9001, ISO 17025, and ISO 17034 guidelines. Vendor identifications are proprietary; however, sources of all materials used in the preparation and testing of SPEX CertiPrep CRMs are tracked and documented. For further assistance, please contact Sales Support at [crmsales@spexcsp.com](mailto:crmsales@spexcsp.com).

## Instructions for Use:

Primary usage of this CRM is in neat form or diluted serially with matrix of a purity at or greater than the purity of the original matrix solution. If dilution is required, the diluent must be compatible with all certified analytes and contain stabilizers appropriate for the period of intended use. The CRM can also be used as a spike or with a spike, again with appropriate compatibility considerations. All solutions should be thoroughly mixed, by shaking, prior to use and never pipetted directly from the bottle. Do not return excess solution to the bottle. All surfaces that come in contact with the solution must be thoroughly cleaned and leached prior to use. Dilutions should be performed only with Class A volumetric glassware. See SDS for health and safety information.

## Method of Preparation:

Clean laboratory procedures and techniques have been used throughout the preparation. All materials, equipment, analytical instrumentation and personnel have been qualified prior to use. The highest purity acids applicable, 18 megohm, double deionized water, acid-leached triple-rinsed bottles (where appropriate), and Class A/calibrated volumetrics have been used in all preparations.

## Homogeneity:

The homogeneity of the CRM has been confirmed by procedures consistent with ISO 17025, ISO 17034, and ASTM D6362-98 Appendix X2. Random, replicate samples of the final, packaged material have been analyzed to prove homogeneity in accordance with our internal procedure 4600-HOMOGEN-1A. Since the product is highly homogeneous, any sample size taken for analysis would be within the uncertainty budget. This is consistent with the intended use of the CRM.

## Statistical Estimator and Confidence Limits:

The certified value 'X' listed on the reverse of this document is at the 95% level of confidence and can be expressed as:

- $X = \bar{x} \pm U$  where  $\bar{x}$ =certified value,  $U$ =expanded uncertainty,  $\bar{x}$ =property value
- $U = k u_c$ , where  $k=2$  is the coverage factor at the 95% confidence level
- $u_c$ =combined standard uncertainty obtained by combining the individual element standard uncertainty components  $u_i$ , and  $u_c = \sqrt{\sum u_i^2}$

## Certification Report:

All certified values reported were derived from the Certification Report, SPEX CertiPrep's traceability documentation, identified by the lot number of this CRM. During the stated period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution. For further assistance, please contact Sales Support at [crmsales@spexcsp.com](mailto:crmsales@spexcsp.com).

## Legal Notice:

SPEX CertiPrep reference materials are not for any cosmetic, drug or household application and are to be used only by qualified individuals who are trained in appropriate procedures. No claims against SPEX CertiPrep, LLC, of any kind whatsoever, whether based on breach of warranty, alleged negligence, or otherwise, with respect to this Reference Material shall be greater than the purchase price. In no event shall SPEX CertiPrep, LLC, be liable for any loss of profits or any incidental, special, or consequential damages.

Reagent

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**ME 10PPM\_00013**



received

7/29/19

ID: 5714200

## CERTIFICATE OF ANALYSIS

Single-Element Aqueous CRM

Product #: G34-4400-10PPM331-100

Mercury (Hg) – 10 µg/mL

Lot #: 991303-38

Matrix: 2% HNO<sub>3</sub>

Element	Certified Concentration & Uncertainty
Hg	10.0 ± 0.1 µg/mL (w/v)
	10.0 ± 0.1 µg/g (w/w)

**Intended Use:** This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

**Certification & Traceability:** This CRM was manufactured, processed, and certified under a quality management system that is registered/accredited to ISO 9001, ISO Guide 34, and ISO/IEC 17025. This CRM was prepared to a nominal concentration of 10.0 µg/mL by gravimetric methods using a single-element concentrate dissolved in high purity nitric acid (HNO<sub>3</sub>) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration and uncertainty were determined using the "High Performance ICP-OES" protocol developed by NIST, and both the certified concentration and uncertainty values are traceable to **NIST SRM 3133, lot #061204**. The uncertainty associated with the certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

**Indicative Values:** ICP-MS was used to determine trace metal concentrations for this product (nd = not determined).

Trace Concentrations (µg/L)													
Ag	1	Co	<1	Ge	<0.5	Lu	<0.2	P	<100	Sb	<0.5	Te	<1
Al	<2	Cs	<0.5	Hf	<0.2	Mg	<5	Pb	<1	Sc	<5	Ti	<2
As	<2	Cr	<0.5	Hg	MAJOR	Mn	<1	Pd	<0.5	Se	<2	Tl	<0.5
Au	<0.5	Cu	<1	Ho	<0.2	Mo	<0.5	Pr	<0.2	Si	<100	Tm	<0.2
B	<5	Dy	<0.2	In	nd	Na	<25	Pt	<0.5	Sm	<0.2	V	<1
Ba	<1	Er	<0.2	Ir	<0.2	Nb	<0.5	Rb	<0.5	Sn	<0.5	W	<0.5
Bi	<0.2	Eu	<0.2	K	<25	Nd	<0.2	Re	<0.2	Sr	<1	Y	<0.5
Ca	<25	Fe	<10	La	<0.5	Ni	<2	Rh	<0.5	Ta	<0.5	Yb	<0.2
Cd	<0.5	Ga	<0.5	Li	<2	Os	<0.5	Ru	<0.5	Tb	<0.5	Zn	<2
Ce	<0.2	Gd	<0.2										

**Instructions for Use:** We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

**Period of Validity:** CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau, Certifying Officer

July 18, 2019

Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

## USA

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## Europe

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The Netherlands

**Health and Safety Information:** Refer to the Safety Data Sheet (SDS).

**Homogeneity:** This solution was determined to be homogeneous by procedures consistent with the requirements of ISO Guide 34 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with QSP 6-13 Assessment of Homogeneity and Stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

**Quality Manual Rev:** No. 5, 03/01/2013

**Further Information:** Please contact CPI International for further information about this CRM.

**Quality Certifications:** This CRM was prepared under a quality management system that is registered/accredited to the following:

- ISO 9001 – Quality Management Systems – Requirements (TUV NORD Cert. No. 44 100 16560231)
- ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories (A2LA Cert. No. 2848.01)
- ISO Guide 34 – General Requirements for the Competence of Reference Material Producers (A2LA Cert. No. 2848.02)
  - ISO Guide 34 references additional requirements specified in ISO Guide 31 and ISO Guide 35.

Reagent

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**ME ICPMS CAL\_00052**



5888097

## CERTIFICATE OF ANALYSIS

Multi-Element Aqueous CRM

Product #: TA-CAL1

ICP ICPMS CAL Mix # 1

Lot #: 1018875-2

Matrix: 5% HNO<sub>3</sub>/tr. HF

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
As	100.0 ± 0.5 mg/L	Li	100.0 ± 0.5 mg/L	Si	1000 ± 5 mg/L
Ba	100.0 ± 0.5 mg/L	Mn	99.99 ± 0.50 mg/L	Sn	100.0 ± 0.5 mg/L
Be	100.0 ± 0.5 mg/L	Mo	100.0 ± 0.5 mg/L	Sr	100.0 ± 0.5 mg/L
Cd	100.0 ± 0.5 mg/L	Ni	100.0 ± 0.5 mg/L	Ti	100.0 ± 0.5 mg/L
Co	100.0 ± 0.5 mg/L	Pb	100.0 ± 0.5 mg/L	Tl	100.0 ± 0.5 mg/L
Cr	100.0 ± 0.5 mg/L	Sb	100.0 ± 0.5 mg/L	V	100.0 ± 0.5 mg/L
Cu	100.0 ± 0.5 mg/L	Se	100.0 ± 0.5 mg/L		

## Source Material Lot# Chart

Element	Source Material Lot#	Element	Source Material Lot#	Element	Source Material Lot#
As	166531	Li	170237	Si	983062
Ba	150283r	Mn	167540	Sn	171360
Be	989234	Mo	175215	Sr	976606
Cd	173171	Ni	752769	Ti	161694
Co	979870	Pb	168223	Tl	983036
Cr	880115	Sb	978317	V	983037
Cu	148793	Se	929078		

**Intended Use:** This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

**Certification & Traceability:** This CRM was manufactured, processed, and certified under a quality management system that is registered/accredited to ISO 9001, ISO 17034, and ISO/IEC 17025. This CRM was prepared to the certified concentrations shown above by gravimetric methods, using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to **NIST SRMs (see reverse side)**. The solution was stabilized using high purity nitric acid (HNO<sub>3</sub>), trace hydrofluoric acid (HF) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against **NIST SRMs (see reverse side)**. The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

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CPI International

**Instructions for Use:** We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

**Period of Validity:** CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.



Chuck Goudreau, Certifying Officer

September 18, 2019

Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

**Health and Safety Information:** Refer to the Safety Data Sheet (SDS).

**Homogeneity:** This solution was determined to be homogeneous by procedures consistent with the requirements of ISO Guide 34 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with QSP 6-13 Assessment of Homogeneity and Stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

**Quality Manual Rev:** No. 5, 03/01/2013

**Further Information:** Please contact CPI International for further information about this CRM.

**Quality Certifications:** This CRM was prepared under a quality management system that is registered/accredited to the following:

- ISO 9001 – Quality Management Systems – Requirements (TUV NORD Cert. No. 44 100 16560231)
- ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories (A2LA Cert. No. 2848.01)
- ISO Guide 34 – General Requirements for the Competence of Reference Material Producers (A2LA Cert. No. 2848.02)
  - ISO Guide 34 references additional requirements specified in ISO Guide 31 and ISO Guide 35.

**This CRM is traceable to the following NIST SRMs:**

Analyte	Aq. SRM	MO SRM		Analyte	Aq. SRM	MO SRM		Analyte	Aq. SRM	MO SRM
Ag	3151	1077a		Hf	3122	—		S	3154	2770
Al	3101a	1075a		Hg	3133	3133		Sb	3102a	3102a
As	3103a	3103a		Ho	3123a	—		Sc	3148a	3148a
Au	3121	—		In	3124a	3124a		Se	3149	3149
B	3107	3107		K	3141a	3141a		Si	3150	1066a
Ba	3104a	1051b		La	3127a	3127a		Sm	3147a	—
Be	3105a	3105a		Li	3129a	3129a		Sn	3161a	1057b
Bi	3106	3106		Lu	3130a	—		SO <sub>4</sub> <sup>2-</sup>	3181	—
Br	3184	—		Mg	3131a	3131a		Sr	3153a	3153a
Ca	3109a	3109a		Mn	3132	3132		Ta	3155	—
Cd	3108	1053a		Mo	3134	3134		Tb	3157a	—
Ce	3110	3110		Na	3152a	3152a		Te	3156	—
Cl	3182	1818a		Nb	3137	—		Th	3159	—
Co	3113	3113		Nd	3135a	—		Ti	3162a	3162a
Cr	3112a	1078b		Ni	3136	1065b		Tl	3158	3158
Cs	3111a	—		NO <sub>3</sub> <sup>-</sup>	3185	—		Tm	3160a	—
Cu	3114	1080a		P	3139a	3139a		U	3164	—
Dy	3115a	—		Pb	3128	3128		V	3165	1052b
Er	3116a	—		Pd	3138	—		W	3163	3163
Eu	3117a	—		PO <sub>4</sub> <sup>3-</sup>	3186	—		Y	3167a	3167a
F	3183	—		Pr	3142a	—		Yb	3166a	—
Fe	3126a	1079b		Pt	3140	3140		Zn	3168a	3168a
Ga	3119a	—		Rb	3145a	—		Zr	3169	3169
Gd	3118a	—		Re	3143	—				
Ge	3120a	—		Rh	3144	3144				



Reagent

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**ME ICPMS CAL\_00053**



5931160

## CERTIFICATE OF ANALYSIS

Multi-Element Aqueous CRM

Product #: TA-CAL1-SS

ICP ICPMS CAL Mix # 1

Lot #: 992738-1

Matrix: 5% HNO<sub>3</sub>/tr. HF

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
As	100.1 ± 0.5 mg/L	Li	100.1 ± 0.5 mg/L	Si	1000 ± 5 mg/L
Ba	100.0 ± 0.5 mg/L	Mn	100.0 ± 0.5 mg/L	Sn	100.0 ± 0.5 mg/L
Be	100.0 ± 0.5 mg/L	Mo	100.1 ± 0.5 mg/L	Sr	100.1 ± 0.5 mg/L
Cd	100.0 ± 0.5 mg/L	Ni	100.0 ± 0.5 mg/L	Ti	100.0 ± 0.5 mg/L
Co	100.0 ± 0.5 mg/L	Pb	100.0 ± 0.5 mg/L	Tl	100.0 ± 0.5 mg/L
Cr	100.0 ± 0.5 mg/L	Sb	100.0 ± 0.5 mg/L	V	100.0 ± 0.5 mg/L
Cu	100.0 ± 0.5 mg/L	Se	100.0 ± 0.5 mg/L		

**Intended Use:** This solution is intended for use as a second source certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

**Certification & Traceability:** This CRM was manufactured, processed, and certified under a quality management system that is registered/accredited to ISO 9001, ISO 17034, and ISO/IEC 17025. This CRM was prepared to the certified concentrations shown above by gravimetric methods, using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to **NIST SRMs (see reverse side)**. The solution was stabilized using high purity nitric acid (HNO<sub>3</sub>), trace hydrofluoric acid (HF) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against **NIST SRMs (see reverse side)**. The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

**Instructions for Use:** We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

**Period of Validity:** CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau, Certifying Officer

September 27, 2019  
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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**Health and Safety Information:** Refer to the Safety Data Sheet (SDS).

**Homogeneity:** This solution was determined to be homogeneous by procedures consistent with the requirements of ISO Guide 34 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with QSP 6-13 Assessment of Homogeneity and Stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

**Quality Manual Rev:** No. 5, 03/01/2013

**Further Information:** Please contact CPI International for further information about this CRM.

**Quality Certifications:** This CRM was prepared under a quality management system that is registered/accredited to the following:

- ISO 9001 – Quality Management Systems – Requirements (TUV NORD Cert. No. 44 100 16560231)
- ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories (A2LA Cert. No. 2848.01)
- ISO Guide 34 – General Requirements for the Competence of Reference Material Producers (A2LA Cert. No. 2848.02)
  - ISO Guide 34 references additional requirements specified in ISO Guide 31 and ISO Guide 35.

**This CRM is traceable to the following NIST SRMs:**

Analyte	Aq. SRM	MO SRM		Analyte	Aq. SRM	MO SRM		Analyte	Aq. SRM	MO SRM
Ag	3151	1077a		Hf	3122	—		S	3154	2770
Al	3101a	1075a		Hg	3133	3133		Sb	3102a	3102a
As	3103a	3103a		Ho	3123a	—		Sc	3148a	3148a
Au	3121	—		In	3124a	3124a		Se	3149	3149
B	3107	3107		K	3141a	3141a		Si	3150	1066a
Ba	3104a	1051b		La	3127a	3127a		Sm	3147a	—
Be	3105a	3105a		Li	3129a	3129a		Sn	3161a	1057b
Bi	3106	3106		Lu	3130a	—		SO <sub>4</sub> <sup>2-</sup>	3181	—
Br	3184	—		Mg	3131a	3131a		Sr	3153a	3153a
Ca	3109a	3109a		Mn	3132	3132		Ta	3155	—
Cd	3108	1053a		Mo	3134	3134		Tb	3157a	—
Ce	3110	3110		Na	3152a	3152a		Te	3156	—
Cl	3182	1818a		Nb	3137	—		Th	3159	—
Co	3113	3113		Nd	3135a	—		Ti	3162a	3162a
Cr	3112a	1078b		Ni	3136	1065b		Tl	3158	3158
Cs	3111a	—		NO <sub>3</sub> <sup>-</sup>	3185	—		Tm	3160a	—
Cu	3114	1080a		P	3139a	3139a		U	3164	—
Dy	3115a	—		Pb	3128	3128		V	3165	1052b
Er	3116a	—		Pd	3138	—		W	3163	3163
Eu	3117a	—		PO <sub>4</sub> <sup>3-</sup>	3186	—		Y	3167a	3167a
F	3183	—		Pr	3142a	—		Yb	3166a	—
Fe	3126a	1079b		Pt	3140	3140		Zn	3168a	3168a
Ga	3119a	—		Rb	3145a	—		Zr	3169	3169
Gd	3118a	—		Re	3143	—				
Ge	3120a	—		Rh	3144	3144				

Reagent

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**ME ICPMS LLIC\_00026**

**1.0 ACCREDITATION / REGISTRATION**

**INORGANIC VENTURES** is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

**2.0 PRODUCT DESCRIPTION**

Product Code:	Multi Analyte Custom Grade Solution		
Catalog Number:	6020ICS-0A		
Lot Number:	P2-MEB676415		
Matrix:	1% (v/v) HNO <sub>3</sub>		
Value / Analyte(s):	10 000 µg/mL ea: Chloride, 2 000 µg/mL ea: Carbon, 1 000 µg/mL ea: Calcium,                          Aluminum, Potassium,                         Magnesium, Phosphorus,                       Sulfur, 20 µg/mL ea: Titanium,                         Molybdenum		

**3.0 CERTIFIED VALUES AND UNCERTAINTIES**

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	1 000 ± 3 µg/mL	Calcium, Ca	1 000 ± 4 µg/mL
Carbon, C	2 000 ± 4 µg/mL	Chloride, Cl	10 000.0 ± 60.0 µg/mL
Iron, Fe	1 000 ± 4 µg/mL	Magnesium, Mg	1 000 ± 4 µg/mL
Molybdenum, Mo	20.00 ± 0.11 µg/mL	Phosphorus, P	1 000 ± 5 µg/mL
Potassium, K	1 000 ± 4 µg/mL	Sodium, Na	1 000 ± 3 µg/mL
Sulfur, S	1 000 ± 4 µg/mL	Titanium, Ti	20.04 ± 0.14 µg/mL

**Density:** 1.033 g/mL (measured at 20 ± 4 °C)

**Assay Information:**

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
C	Acidimetric	84L	84L
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cl	Calculated		See Sec. 4.2
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mo	ICP Assay	3134	130418
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
S	Acidimetric	84L	84L
S	ICP Assay	3154	892205
Ti	ICP Assay	3162a	130925

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of  $k = 2$ .

#### Characterization of CRM/RM by Two or More Methods

Certified Value,  $X_{CRM/RM}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

$X_i$  = mean of Assay Method i with standard uncertainty  $u_{char\ i}$   
 $w_i$  = the weighting factors for each method calculated using the inverse square of the variance:  
 $w_i = (1/u_{char\ i})^2 / (\sum(1/u_{char\ i})^2)$

$$CRM/RM Expanded Uncertainty (\pm) = U_{CRM/RM} = k(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$$

$k$  = coverage factor = 2

$u_{char} = [\sum(w_i)^2(u_{char\ i})^2]^{1/2}$  where  $u_{char\ i}$  are the errors from each characterization method  
 $u_{bb}$  = bottle to bottle homogeneity standard uncertainty  
 $u_{lts}$  = long term stability standard uncertainty (storage)  
 $u_{ts}$  = transport stability standard uncertainty

#### Characterization of CRM/RM by One Method

Certified Value,  $X_{CRM/RM}$ , where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a)(u_{char\ a})$$

$X_a$  = mean of Assay Method A with  
 $u_{char\ a}$  = the standard uncertainty of characterization Method A

$$CRM/RM Expanded Uncertainty (\pm) = U_{CRM/RM} = k(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$$

$k$  = coverage factor = 2

$u_{char\ a}$  = the errors from characterization  
 $u_{bb}$  = bottle to bottle homogeneity standard uncertainty  
 $u_{lts}$  = long term stability standard uncertainty (storage)  
 $u_{ts}$  = transport stability standard uncertainty

## 4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

### 4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

### 4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

### 4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

## 5.0 TRACE METALLIC IMPURITIES (TMI ) DETERMINED BY ICP-MS AND ICP-OES ( $\mu\text{g/mL}$ )

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag <	0.000200	M	Er <	0.000100	M	Mn	0.002826	s	S <		M	V <	0.001074
s	Al <		M	Eu <	0.000100	s	Mo <		M	Sb <	0.003143	M	W <	0.003110
O	As <	0.003202	s	Fe <		s	Na <		M	Sc <	0.000412	M	Y <	0.000100
M	Au <	0.000100	M	Ga <	0.000160	M	Nb <	0.000100	M	Se <	0.002358	M	Yb <	0.000100
M	B <	0.004286	M	Gd <	0.000100	M	Nd <	0.000100	n	Si <		M	Zn	0.002368
M	Ba	0.001206	M	Ge <	0.000979	O	Ni <	0.010330	M	Sm <	0.000100	M	Zr <	0.000645
M	Be <	0.000100	M	Hf <	0.000100	M	Os <	0.000414	M	Sn	0.002600			
M	Bi <	0.001328	M	Hg <	0.000200	s	P <		O	Sr	0.005578			
s	Ca <		M	Ho <	0.000100	M	Pb <	0.001383	M	Ta <	0.000196			
M	Cd	0.008401	M	In <	0.000100	M	Pd <	0.000136	M	Tb <	0.000100			
M	Ce <	0.000100	M	Ir <	0.000100	M	Pr <	0.000100	M	Te <	0.001916			
M	Co	0.003323	s	K <		M	Pt <	0.000100	M	Th <	0.000100			
M	Cr <	0.003509	M	La <	0.000100	M	Rb	0.011919	s	Ti <				
M	Cs <	0.000100	O	Li	0.002479	M	Re	0.002700	M	Tl <	0.000100			
M	Cu	0.009781	M	Lu <	0.000100	M	Rh <	0.000100	M	Tm <	0.000100			
M	Dy <	0.000100	s	Mg <		M	Ru <	0.000163	M	U <	0.000100			

M - Checked by ICP-MS      O - Checked by ICP-OES      i - Spectral Interference

n - Not Checked For      s - Solution Standard Element

## 6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

## 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

### 7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.
- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.
- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.
- For more information, visit [www.inorganicventures.com/TCT](http://www.inorganicventures.com/TCT)

## 8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

## 9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

## 10.0 QUALITY STANDARD DOCUMENTATION

### 10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

### 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

### **10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"**

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030; Fax: 540.585.3012; [inorganicventures.com](http://inorganicventures.com); [info@inorganicventures.com](mailto:info@inorganicventures.com)

## **11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY**

### **11.1 Certification Issue Date**

February 16, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

### **11.2 Lot Expiration Date**

**- February 16, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

### **11.3 Period of Validity**

- Sealed TCT Bag Open Date: \_\_\_\_\_

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

## **12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS**

### **Certificate Prepared By:**

Uyen Truong  
Product Documentation Supervisor



### **Certificate Approved By:**

Michael Booth  
Supervisor, Quality Control



### **Certifying Officer:**

Paul Gaines  
CEO, Senior Technical Director



Reagent

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**ME SILVER 2nd\_00001**



5296059

## CERTIFICATE OF ANALYSIS

Single-Element Aqueous CRM

Product #: TA-1000511-SS

SE Std Silver (Ag) – 1000 µg/mL

Lot #: 711054039C-1

Matrix: 2% HNO<sub>3</sub>

Element	Certified Concentration & Uncertainty
Ag	1000 ± 3 µg/mL (w/v)
	984 ± 3 µg/g (w/w)

**Intended Use:** This solution is intended for use as a second source certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

**Certification & Traceability:** This CRM was manufactured, processed, and certified under a quality management system that is registered/accredited to ISO 9001, ISO 17034, and ISO/IEC 17025. This CRM was prepared to a nominal concentration of 1000 µg/mL by gravimetric methods using 99.992% pure silver (Ag) metal dissolved in high purity nitric acid (HNO<sub>3</sub>) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration and uncertainty were determined using the "High Performance ICP-OES" protocol developed by NIST, and both the certified concentration and uncertainty values are traceable to **NIST SRM 3151**. The uncertainty associated with the certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

**Indicative Values:** ICP-MS was used to determine trace metal concentrations for this product (nd = not determined).

Trace Concentrations (µg/L)													
Ag	MAJOR	Co	<0.05	Ge	<0.02	Lu	<0.02	P	Nd	Sb	<0.02	Te	<0.02
Al	<0.05	Cr	<0.05	Hf	<0.02	Mg	<0.5	Pb	<0.05	Sc	<0.02	Tl	<0.1
As	<0.05	Cs	5	Hg	Nd	Mn	<0.05	Pd	<0.02	Se	<0.1	Tl	<0.02
Au	<0.02	Cu	<0.02	Ho	<0.02	Mo	<0.02	Pr	<0.02	Si	35	Tm	<0.02
B	<1	Dy	<0.02	In	<0.02	Na	<3	Pt	<0.02	Sm	<0.02	V	<0.05
Ba	<0.02	Er	<0.02	Ir	<0.2	Nb	<0.02	Rb	<0.02	Sn	<0.5	W	<0.02
Bi	<0.02	Eu	<0.02	K	<1	Nd	<0.02	Re	<0.02	Sr	<0.02	Y	<0.02
Ca	<1	Fe	<1	La	<0.02	Ni	<0.02	Rh	<0.02	Ta	<0.02	Yb	<0.02
Cd	<0.02	Ga	<0.02	Li	<0.5	Os	<0.02	Ru	<0.02	Tb	<0.02	Zn	<0.02
Ce	<0.02	Gd	<0.02										

**Instructions for Use:** We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

**Period of Validity:** CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

\_\_\_\_\_  
**Chuck Goudreau, Certifying Officer**

January 8, 2019  
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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F: +31 20 420 28 36

**Health and Safety Information:** Refer to the Safety Data Sheet (SDS).

**Homogeneity:** This solution was determined to be homogeneous by procedures consistent with the requirements of ISO Guide 34 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with QSP 6-13 Assessment of Homogeneity and Stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

**Quality Manual Rev:** No. 5, 03/01/2013

**Further Information:** Please contact CPI International for further information about this CRM.

**Quality Certifications:** This CRM was prepared under a quality management system that is registered/accredited to the following:

- ISO 9001 – Quality Management Systems – Requirements (TUV NORD Cert. No. 44 100 16560231)
- ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories (A2LA Cert. No. 2848.01)
- ISO Guide 34 – General Requirements for the Competence of Reference Material Producers (A2LA Cert. No. 2848.02)
  - ISO Guide 34 references additional requirements specified in ISO Guide 31 and ISO Guide 35.

Reagent

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**ME ZINC 2nd\_00001**



5296054

## CERTIFICATE OF ANALYSIS

Single-Element Aqueous CRM

Product #: TA-1000681-SS

SE Std Zinc (Zn) – 1000 µg/mL

Lot #: 711054039B-1

Matrix: 2% HNO<sub>3</sub>

Element	Certified Concentration & Uncertainty
Zn	1000 ± 3 µg/mL (w/v)
	989 ± 3 µg/g (w/w)

**Intended Use:** This solution is intended for use as a second source certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

**Certification & Traceability:** This CRM was manufactured, processed, and certified under a quality management system that is registered/accredited to ISO 9001, ISO 17034, and ISO/IEC 17025. This CRM was prepared to a nominal concentration of 1000 µg/mL by gravimetric methods using 99.999% pure zinc (Zn) metal dissolved in high purity nitric acid (HNO<sub>3</sub>) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration and uncertainty were determined using the "High Performance ICP-OES" protocol developed by NIST, and both the certified concentration and uncertainty values are traceable to **NIST SRM 3168a**. The uncertainty associated with the certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

**Indicative Values:** ICP-MS was used to determine trace metal concentrations for this product (nd = not determined).

Trace Concentrations (µg/L)													
Ag	<0.02	Co	<0.05	Ge	<0.02	Lu	<0.02	P	Nd	Sb	<0.02	Te	<0.1
Al	<0.05	Cr	<0.05	Hf	<0.02	Mg	<0.1	Pb	3	Sc	<0.02	Ti	<0.02
As	<0.05	Cs	<0.02	Hg	Nd	Mn	<0.05	Pd	<0.02	Se	<0.1	Tl	<0.02
Au	<0.02	Cu	<0.02	Ho	<0.02	Mo	<0.02	Pr	<0.02	Si	<5	Tm	<0.02
B	<1	Dy	<0.02	In	<0.02	Na	<3	Pt	<0.02	Sm	<0.02	V	<0.05
Ba	<0.02	Er	<0.02	Ir	<0.02	Nb	<0.02	Rb	<0.02	Sn	<0.5	W	<0.02
Bi	<0.02	Eu	<0.02	K	<1	Nd	<0.02	Re	<0.02	Sr	<0.02	Y	<0.02
Ca	<1	Fe	<1	La	<0.02	Ni	<0.02	Rh	<0.02	Ta	<0.02	Yb	<0.02
Cd	<0.4	Ga	<0.02	Li	<0.02	Os	<0.02	Ru	<0.02	Tb	<0.02	Zn	MAJOR
Ce	<0.02	Gd	<0.02										

**Instructions for Use:** We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

**Period of Validity:** CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

\_\_\_\_\_  
**Chuck Goudreau, Certifying Officer**

January 8, 2019  
\_\_\_\_\_  
**Certification Date**

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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**Health and Safety Information:** Refer to the Safety Data Sheet (SDS).

**Homogeneity:** This solution was determined to be homogeneous by procedures consistent with the requirements of ISO Guide 34 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with QSP 6-13 Assessment of Homogeneity and Stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

**Quality Manual Rev:** No. 5, 03/01/2013

**Further Information:** Please contact CPI International for further information about this CRM.

**Quality Certifications:** This CRM was prepared under a quality management system that is registered/accredited to the following:

- ISO 9001 – Quality Management Systems – Requirements (TUV NORD Cert. No. 44 100 16560231)
- ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories (A2LA Cert. No. 2848.01)
- ISO Guide 34 – General Requirements for the Competence of Reference Material Producers (A2LA Cert. No. 2848.02)
  - ISO Guide 34 references additional requirements specified in ISO Guide 31 and ISO Guide 35.

Reagent

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**ME\_CRI\_30\_00017**



6007759

## CERTIFICATE OF ANALYSIS

Multi-Element Aqueous CRM

Product #: TA-CM-NOV19-IRV1-250

### ICPMS Check Standard

Lot #: 10106962-1

Matrix: 2% HNO<sub>3</sub>/tr. HF

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
Ag	1.00 ± 0.01 µg/mL	Cs*	0.49 ± 0.01 µg/mL	Sb	1.00 ± 0.01 µg/mL
Al	10.01 ± 0.10 µg/mL	Cu	1.01 ± 0.01 µg/mL	Se	1.02 ± 0.01 µg/mL
As	1.01 ± 0.01 µg/mL	Fe	20.00 ± 0.20 µg/mL	Sn	10.01 ± 0.10 µg/mL
B	1.01 ± 0.01 µg/mL	K	99.89 ± 1.00 µg/mL	Sr	1.01 ± 0.01 µg/mL
Ba	1.01 ± 0.01 µg/mL	Mg	100.2 ± 1.0 µg/mL	Th*	0.50 ± 0.01 µg/mL
Be*	0.50 ± 0.01 µg/mL	Mn	1.01 ± 0.01 µg/mL	Ti	1.01 ± 0.01 µg/mL
Ca	500.2 ± 5.0 µg/mL	Mo	1.00 ± 0.01 µg/mL	Tl	1.00 ± 0.01 µg/mL
Cd	1.02 ± 0.01 µg/mL	Na	100.0 ± 1.0 µg/mL	U	1.00 ± 0.01 µg/mL
Ce	1.01 ± 0.01 µg/mL	Ni	1.01 ± 0.01 µg/mL	V	1.01 ± 0.01 µg/mL
Co	1.00 ± 0.01 µg/mL	Pb	1.01 ± 0.01 µg/mL	Zr	1.01 ± 0.01 µg/mL
Cr	1.01 ± 0.01 µg/mL	Rb*	0.50 ± 0.01 µg/mL	Zn	10.01 ± 0.10 µg/mL

\*Indicates indicative value

### Source Material Lot # Chart

Element	Source Material Lot #	Element	Source Material Lot #	Element	Source Material Lot#
Ag	975475	Cs	738045	Sb	1013797
Al	995977	Cu	1019652	Se	982461
As	1034904	Fe	994438R	Sn	977645
B	982524	K	980507	Sr	998106
Ba	994634	Mg	1013353	Th	1029141
Be	998969	Mn	997487	Ti	987438
Ca	1016895	Mo	987189	Tl	991734
Cd	996631	Na	997471	U	1017496
Ce	171633	Ni	984273	V	990117
Co	979906	Pb	981329	Zr	171418
Cr	1011874	Rb	168390	Zn	984272

**Intended Use:** This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

**Certification & Traceability:** This CRM was manufactured, processed, and certified under a quality management system that is registered/accredited to ISO 9001, ISO 17034, and ISO/IEC 17025. This CRM was prepared to the certified concentrations shown above by gravimetric methods, using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to **NIST SRMs (see reverse side)**. The solution was stabilized using high purity nitric acid (HNO<sub>3</sub>), trace hydrofluoric acid (HF) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against **NIST SRMs (see reverse side)**. The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

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The Netherlands

**Instructions for Use:** We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

**Period of Validity:** CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.



Chuck Goudreau, Certifying Officer

December 4, 2019

Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

**Health and Safety Information:** Refer to the Safety Data Sheet (SDS).

**Homogeneity:** This solution was determined to be homogeneous by procedures consistent with the requirements of ISO Guide 34 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with QSP 6-13 Assessment of Homogeneity and Stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

**Quality Manual Rev:** No. 5, 03/01/2013

**Further Information:** Please contact CPI International for further information about this CRM.

**Quality Certifications:** This CRM was prepared under a quality management system that is registered/accredited to the following:

- ISO 9001 – Quality Management Systems – Requirements (TUV NORD Cert. No. 44 100 16560231)
- ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories (A2LA Cert. No. 2848.01)
- ISO Guide 34 – General Requirements for the Competence of Reference Material Producers (A2LA Cert. No. 2848.02)
  - ISO Guide 34 references additional requirements specified in ISO Guide 31 and ISO Guide 35.

**This CRM is traceable to the following NIST SRMs:**

Analyte	Aq. SRM	MO SRM		Analyte	Aq. SRM	MO SRM		Analyte	Aq. SRM	MO SRM
Ag	3151	1077a		Hf	3122	—		S	3154	2770
Al	3101a	1075a		Hg	3133	3133		Sb	3102a	3102a
As	3103a	3103a		Ho	3123a	—		Sc	3148a	3148a
Au	3121	—		In	3124a	3124a		Se	3149	3149
B	3107	3107		K	3141a	3141a		Si	3150	1066a
Ba	3104a	1051b		La	3127a	3127a		Sm	3147a	—
Be	3105a	3105a		Li	3129a	3129a		Sn	3161a	1057b
Bi	3106	3106		Lu	3130a	—		SO <sub>4</sub> <sup>2-</sup>	3181	—
Br	3184	—		Mg	3131a	3131a		Sr	3153a	3153a
Ca	3109a	3109a		Mn	3132	3132		Ta	3155	—
Cd	3108	1053a		Mo	3134	3134		Tb	3157a	—
Ce	3110	3110		Na	3152a	3152a		Te	3156	—
Cl	3182	1818a		Nb	3137	—		Th	3159	—
Co	3113	3113		Nd	3135a	—		Ti	3162a	3162a
Cr	3112a	1078b		Ni	3136	1065b		Tl	3158	3158
Cs	3111a	—		NO <sub>3</sub> <sup>-</sup>	3185	—		Tm	3160a	—
Cu	3114	1080a		P	3139a	3139a		U	3164	—
Dy	3115a	—		Pb	3128	3128		V	3165	1052b
Er	3116a	—		Pd	3138	—		W	3163	3163
Eu	3117a	—		PO <sub>4</sub> <sup>3-</sup>	3186	—		Y	3167a	3167a
F <sup>-</sup>	3183	—		Pr	3142a	—		Yb	3166a	—
Fe	3126a	1079b		Pt	3140	3140		Zn	3168a	3168a
Ga	3119a	—		Rb	3145a	—		Zr	3169	3169
Gd	3118a	—		Re	3143	—				
Ge	3120a	—		Rh	3144	3144				



Reagent

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**Spike Mix 1\_00010**

Rec. 9/20/19



5829504

ID: Spike Mix 1\_00010

Exp: 03/12/21 Ppd: VS

ICP SPIKE MIX 1

## CERTIFICATE OF ANALYSIS

Multi-Element Aqueous CRM

Product #: TA-SPIKE1+

**Spike Mix # 1**

Lot #: 1021235-1

Matrix: 5% HNO<sub>3</sub>/tr. HF

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
As	200.0 ± 1.0 mg/L	Li	100.0 ± 0.5 mg/L	Sn	200.0 ± 1.0 mg/L
Ba	200.0 ± 1.0 mg/L	Mn	100.0 ± 0.5 mg/L	Sr	100.0 ± 0.5 mg/L
Be	99.99 ± 0.50 mg/L	Mo	100.0 ± 0.5 mg/L	Ti	100.0 ± 0.5 mg/L
Cd	100.0 ± 0.5 mg/L	Ni	100.0 ± 0.5 mg/L	Tl	200.0 ± 1.0 mg/L
Co	99.98 ± 0.50 mg/L	Pb	100.0 ± 0.5 mg/L	V	100.0 ± 0.5 mg/L
Cr	100.0 ± 0.5 mg/L	Se	200.0 ± 1.0 mg/L		
Cu	100.0 ± 0.5 mg/L	Si	200.0 ± 1.0 mg/L		

**Source Material Lot# Chart**

Element	Source Material Lot#	Element	Source Material Lot#	Element	Source Material Lot#
As	166531	Li	170237	Sn	171360
Ba	150283r	Mn	985851	Sr	976606
Be	989234	Mo	118881r	Ti	148663
Cd	173171	Ni	752769	Tl	983036
Co	979870	Pb	168223	V	983037
Cr	880115	Se	929078		
Cu	148793	Si	977647		

**Intended Use:** This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

**Certification & Traceability:** This CRM was manufactured, processed, and certified under a quality management system that is registered/accredited to ISO 9001, ISO 17034, and ISO/IEC 17025. This CRM was prepared to the certified concentrations shown above by gravimetric methods, using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to **NIST SRMs (see reverse side)**. The solution was stabilized using high purity nitric acid (HNO<sub>3</sub>), trace hydrofluoric acid (HF) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against **NIST SRMs (see reverse side)**. The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

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 1013BG Amsterdam F: +31 20 420 28 36

The Netherlands

**Health and Safety Information:** Refer to the Safety Data Sheet (SDS).

**Homogeneity:** This solution was determined to be homogeneous by procedures consistent with the requirements of ISO Guide 34 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with QSP 6-13 Assessment of Homogeneity and Stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

**Quality Manual Rev:** No. 5, 03/01/2013

**Further Information:** Please contact CPI International for further information about this CRM.

**Quality Certifications:** This CRM was prepared under a quality management system that is registered/accredited to the following:

- ISO 9001 – Quality Management Systems – Requirements (TUV NORD Cert. No. 44 100 16560231)
- ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories (A2LA Cert. No. 2848.01)
- ISO Guide 34 – General Requirements for the Competence of Reference Material Producers (A2LA Cert. No. 2848.02)
  - ISO Guide 34 references additional requirements specified in ISO Guide 31 and ISO Guide 35.

**This CRM is traceable to the following NIST SRMs:**

Analyte	Aq. SRM	MO SRM		Analyte	Aq. SRM	MO SRM		Analyte	Aq. SRM	MO SRM
Ag	3151	1077a		Hf	3122	—		S	3154	2770
Al	3101a	1075a		Hg	3133	3133		Sb	3102a	3102a
As	3103a	3103a		Ho	3123a	—		Sc	3148a	3148a
Au	3121	—		In	3124a	3124a		Se	3149	3149
B	3107	3107		K	3141a	3141a		Si	3150	1066a
Ba	3104a	1051b		La	3127a	3127a		Sm	3147a	—
Be	3105a	3105a		Li	3129a	3129a		Sn	3161a	1057b
Bi	3106	3106		Lu	3130a	—		SO <sub>4</sub> <sup>2-</sup>	3181	—
Br	3184	—		Mg	3131a	3131a		Sr	3153a	3153a
Ca	3109a	3109a		Mn	3132	3132		Ta	3155	—
Cd	3108	1053a		Mo	3134	3134		Tb	3157a	—
Ce	3110	3110		Na	3152a	3152a		Te	3156	—
Cl	3182	1818a		Nb	3137	—		Th	3159	—
Co	3113	3113		Nd	3135a	—		Ti	3162a	3162a
Cr	3112a	1078b		Ni	3136	1065b		Tl	3158	3158
Cs	3111a	—		NO <sub>3</sub> <sup>-</sup>	3185	—		Tm	3160a	—
Cu	3114	1080a		P	3139a	3139a		U	3164	—
Dy	3115a	—		Pb	3128	3128		V	3165	1052b
Er	3116a	—		Pd	3138	—		W	3163	3163
Eu	3117a	—		PO <sub>4</sub> <sup>3-</sup>	3186	—		Y	3167a	3167a
F	3183	—		Pr	3142a	—		Yb	3166a	—
Fe	3126a	1079b		Pt	3140	3140		Zn	3168a	3168a
Ga	3119a	—		Rb	3145a	—		Zr	3169	3169
Gd	3118a	—		Re	3143	—				
Ge	3120a	—		Rh	3144	3144				

Reagent

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**SPIKE MIX 2\_00001**



5550525

## CERTIFICATE OF ANALYSIS

Multi-Element Aqueous CRM

Product #: TA-SPIKE2

Spike Mix # 2

Lot #: 992745-2

Matrix: 5% HNO<sub>3</sub>

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
Al	1000 ± 5 mg/L	Fe	1000 ± 5 mg/L	Mg	5000 ± 25 mg/L
Ca	5000 ± 25 mg/L	K	5000 ± 25 mg/L	Na	5000 ± 25 mg/L

**Intended Use:** This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

**Certification & Traceability:** This CRM was manufactured, processed, and certified under a quality management system that is registered/accredited to ISO 9001, ISO 17034, and ISO/IEC 17025. This CRM was prepared to the certified concentrations shown above by gravimetric methods, using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to **NIST SRMs (see reverse side)**. The solution was stabilized using high purity nitric acid (HNO<sub>3</sub>) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against **NIST SRMs (see reverse side)**. The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

**Instructions for Use:** We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

**Period of Validity:** CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau, Certifying Officer

March 28, 2019

Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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The Netherlands

Reagent

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**SPIKE MIX 3\_00001**



555053

## CERTIFICATE OF ANALYSIS

Multi-Element Aqueous CRM

Product #: TA-SPIKE3

Spike Mix # 3

Lot #: 992746-1

Matrix: 5% HNO<sub>3</sub>/tr. HF

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
P	2000 ± 10 mg/L	U	200.0 ± 1.0 mg/L
S	1000 ± 5 mg/L	W	100.0 ± 0.5 mg/L

**Intended Use:** This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

**Certification & Traceability:** This CRM was manufactured, processed, and certified under a quality management system that is registered/accredited to ISO 9001, ISO 17034, and ISO/IEC 17025. This CRM was prepared to the certified concentrations shown above by gravimetric methods, using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to **NIST SRMs (see reverse side)**. The solution was stabilized using high purity nitric acid (HNO<sub>3</sub>), trace hydrofluoric acid (HF) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against **NIST SRMs (see reverse side)**. The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

**Instructions for Use:** We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

**Period of Validity:** CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau, Certifying Officer

March 28, 2019

Certification Date

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The Netherlands

# **METALS**

COVER PAGE  
METALS

Lab Name: Eurofins Irvine Job Number: 440-258875-1

SDG No.: \_\_\_\_\_

Project: ACMS - BP Yerington OU-4b OU-5 Soil

Client Sample ID	Lab Sample ID
WRSB208_0-0.5	440-258875-1
WRSB208_0.5-3	440-258875-2
WRSB208_3-6	440-258875-3
WRSB208_6-15	440-258875-4
WRSB208_15-25	440-258875-5
WRSB208-FD_15-25	440-258875-6
WRSB208_25-35	440-258875-7
WRSB208_35-45	440-258875-8
WRSB208_45-55	440-258875-9
WRSB208_55-65	440-258875-11
WRSB208_65-75	440-258875-12
WRSB208-FD_65-75	440-258875-13
WRSB208_75-85	440-258875-14
WRSB208_85-95	440-258875-15
WRSB208_95-105	440-258875-16
WRSB208_105-115	440-258875-17
WRSB208_115-125	440-258875-19
WRSB208_125-131.5	440-258875-20

Comments:

1A-IN  
INORGANIC ANALYSIS DATA SHEET  
METALS

Client Sample ID: WRSB208\_0-0.5

Lab Sample ID: 440-258875-1

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG ID.:

Date Sampled: 01/07/2020 11:15

Matrix: Solid

Date Received: 01/10/2020 10:00

Reporting Basis: DRY

% Solids: 95.3

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	7500	11	8.1	mg/Kg			5	6010B
7440-42-8	Boron	4.4	5.3	2.6	mg/Kg	J		5	6010B
7440-70-2	Calcium	7000	26	14	mg/Kg			5	6010B
7439-89-6	Iron	14000	11	7.3	mg/Kg			5	6010B
7439-93-2	Lithium	7.5	5.3	3.0	mg/Kg			5	6010B
7439-95-4	Magnesium	3300	11	5.3	mg/Kg			5	6010B
7723-14-0	Phosphorus	440	5.3	2.6	mg/Kg			5	6010B
7440-09-7	Potassium	1200	66	34	mg/Kg			5	6010B
7440-23-5	Sodium	320	66	34	mg/Kg			5	6010B
7440-24-6	Strontium	69	5.3	2.6	mg/Kg		F2 F1	5	6010B
7440-31-5	Tin	ND	11	5.3	mg/Kg			5	6010B
7440-32-6	Titanium	340	2.1	1.1	mg/Kg			5	6010B
7440-36-0	Antimony	0.54	1.1	0.28	mg/Kg	J	F1	20	6020
7440-38-2	Arsenic	5.4	0.53	0.26	mg/Kg			20	6020
7440-39-3	Barium	86	0.53	0.26	mg/Kg		F1 F2	20	6020
7440-41-7	Beryllium	0.47	0.32	0.16	mg/Kg			20	6020
7440-43-9	Cadmium	ND	0.53	0.26	mg/Kg			20	6020
7440-47-3	Chromium	6.4	1.1	0.53	mg/Kg			20	6020
7440-48-4	Cobalt	5.0	0.53	0.22	mg/Kg			20	6020
7440-50-8	Copper	67	1.1	0.53	mg/Kg		F1	20	6020
7439-92-1	Lead	5.0	0.53	0.26	mg/Kg			20	6020
7439-96-5	Manganese	220	0.53	0.26	mg/Kg			20	6020
7439-98-7	Molybdenum	0.63	1.1	0.53	mg/Kg	J		20	6020
7440-02-0	Nickel	5.4	1.1	0.53	mg/Kg			20	6020
7782-49-2	Selenium	1.1	1.1	0.21	mg/Kg			20	6020
7440-22-4	Silver	ND	0.53	0.11	mg/Kg			20	6020
7440-28-0	Thallium	ND	0.53	0.26	mg/Kg			20	6020
7440-62-2	Vanadium	32	1.1	0.53	mg/Kg			20	6020
7440-66-6	Zinc	22	11	5.3	mg/Kg			20	6020
7439-97-6	Mercury	0.062	0.021	0.012	mg/Kg			1	7471A

1A-IN  
INORGANIC ANALYSIS DATA SHEET  
METALS

Client Sample ID: WRSB208\_0.5-3

Lab Sample ID: 440-258875-2

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG ID.:

Date Sampled: 01/07/2020 11:25

Matrix: Solid

Date Received: 01/10/2020 10:00

Reporting Basis: DRY

% Solids: 96.0

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	7900	11	8.1	mg/Kg			5	6010B
7440-42-8	Boron	4.7	5.3	2.6	mg/Kg	J		5	6010B
7440-70-2	Calcium	6200	26	14	mg/Kg			5	6010B
7439-89-6	Iron	14000	11	7.3	mg/Kg			5	6010B
7439-93-2	Lithium	8.2	5.3	2.9	mg/Kg			5	6010B
7439-95-4	Magnesium	3300	11	5.3	mg/Kg			5	6010B
7723-14-0	Phosphorus	470	5.3	2.6	mg/Kg			5	6010B
7440-09-7	Potassium	1200	66	34	mg/Kg			5	6010B
7440-23-5	Sodium	510	66	34	mg/Kg			5	6010B
7440-24-6	Strontium	60	5.3	2.6	mg/Kg			5	6010B
7440-31-5	Tin	ND	11	5.3	mg/Kg			5	6010B
7440-32-6	Titanium	380	2.1	1.1	mg/Kg			5	6010B
7440-36-0	Antimony	0.35	1.1	0.28	mg/Kg	J		20	6020
7440-38-2	Arsenic	5.0	0.53	0.26	mg/Kg			20	6020
7440-39-3	Barium	75	0.53	0.26	mg/Kg			20	6020
7440-41-7	Beryllium	0.41	0.32	0.16	mg/Kg			20	6020
7440-43-9	Cadmium	ND	0.53	0.26	mg/Kg			20	6020
7440-47-3	Chromium	7.7	1.1	0.53	mg/Kg			20	6020
7440-48-4	Cobalt	4.5	0.53	0.22	mg/Kg			20	6020
7440-50-8	Copper	66	1.1	0.53	mg/Kg			20	6020
7439-92-1	Lead	4.0	0.53	0.26	mg/Kg			20	6020
7439-96-5	Manganese	230	0.53	0.26	mg/Kg			20	6020
7439-98-7	Molybdenum	0.58	1.1	0.53	mg/Kg	J		20	6020
7440-02-0	Nickel	5.4	1.1	0.53	mg/Kg			20	6020
7782-49-2	Selenium	1.2	1.1	0.21	mg/Kg			20	6020
7440-22-4	Silver	ND	0.53	0.11	mg/Kg			20	6020
7440-28-0	Thallium	ND	0.53	0.26	mg/Kg			20	6020
7440-62-2	Vanadium	34	1.1	0.53	mg/Kg			20	6020
7440-66-6	Zinc	25	11	5.3	mg/Kg			20	6020
7439-97-6	Mercury	ND	0.021	0.013	mg/Kg			1	7471A

1A-IN  
INORGANIC ANALYSIS DATA SHEET  
METALS

Client Sample ID: WRSB208\_3-6

Lab Sample ID: 440-258875-3

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG ID.:

Date Sampled: 01/07/2020 11:35

Matrix: Solid

Date Received: 01/10/2020 10:00

Reporting Basis: DRY

% Solids: 95.8

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	7700	10	8.1	mg/Kg			5	6010B
7440-42-8	Boron	4.8	5.2	2.6	mg/Kg	J		5	6010B
7440-70-2	Calcium	6200	26	14	mg/Kg			5	6010B
7439-89-6	Iron	14000	10	7.2	mg/Kg			5	6010B
7439-93-2	Lithium	7.5	5.2	2.9	mg/Kg			5	6010B
7439-95-4	Magnesium	3300	10	5.2	mg/Kg			5	6010B
7723-14-0	Phosphorus	540	5.2	2.6	mg/Kg			5	6010B
7440-09-7	Potassium	1200	66	34	mg/Kg			5	6010B
7440-23-5	Sodium	560	66	34	mg/Kg			5	6010B
7440-24-6	Strontium	61	5.2	2.6	mg/Kg			5	6010B
7440-31-5	Tin	ND	10	5.2	mg/Kg			5	6010B
7440-32-6	Titanium	350	2.1	1.0	mg/Kg			5	6010B
7440-36-0	Antimony	0.32	1.0	0.28	mg/Kg	J		20	6020
7440-38-2	Arsenic	4.9	0.52	0.26	mg/Kg			20	6020
7440-39-3	Barium	94	0.52	0.26	mg/Kg			20	6020
7440-41-7	Beryllium	0.37	0.31	0.16	mg/Kg			20	6020
7440-43-9	Cadmium	ND	0.52	0.26	mg/Kg			20	6020
7440-47-3	Chromium	7.1	1.0	0.52	mg/Kg			20	6020
7440-48-4	Cobalt	4.7	0.52	0.22	mg/Kg			20	6020
7440-50-8	Copper	66	1.0	0.52	mg/Kg			20	6020
7439-92-1	Lead	4.0	0.52	0.26	mg/Kg			20	6020
7439-96-5	Manganese	270	0.52	0.26	mg/Kg			20	6020
7439-98-7	Molybdenum	0.64	1.0	0.52	mg/Kg	J		20	6020
7440-02-0	Nickel	5.6	1.0	0.52	mg/Kg			20	6020
7782-49-2	Selenium	1.3	1.0	0.21	mg/Kg			20	6020
7440-22-4	Silver	ND	0.52	0.10	mg/Kg			20	6020
7440-28-0	Thallium	ND	0.52	0.26	mg/Kg			20	6020
7440-62-2	Vanadium	33	1.0	0.52	mg/Kg			20	6020
7440-66-6	Zinc	24	10	5.2	mg/Kg			20	6020
7439-97-6	Mercury	ND	0.021	0.013	mg/Kg			1	7471A

1A-IN  
INORGANIC ANALYSIS DATA SHEET  
METALS

Client Sample ID: WRSB208\_6-15

Lab Sample ID: 440-258875-4

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG ID.:

Date Sampled: 01/07/2020 11:42

Matrix: Solid

Date Received: 01/10/2020 10:00

Reporting Basis: DRY

% Solids: 95.9

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	7900	10	8.1	mg/Kg			5	6010B
7440-42-8	Boron	4.8	5.2	2.6	mg/Kg	J		5	6010B
7440-70-2	Calcium	6300	26	14	mg/Kg			5	6010B
7439-89-6	Iron	13000	10	7.2	mg/Kg			5	6010B
7439-93-2	Lithium	7.4	5.2	2.9	mg/Kg			5	6010B
7439-95-4	Magnesium	3300	10	5.2	mg/Kg			5	6010B
7723-14-0	Phosphorus	510	5.2	2.6	mg/Kg			5	6010B
7440-09-7	Potassium	1200	66	34	mg/Kg			5	6010B
7440-23-5	Sodium	540	66	34	mg/Kg			5	6010B
7440-24-6	Strontium	64	5.2	2.6	mg/Kg			5	6010B
7440-31-5	Tin	ND	10	5.2	mg/Kg			5	6010B
7440-32-6	Titanium	320	2.1	1.0	mg/Kg			5	6010B
7440-36-0	Antimony	0.30	1.0	0.28	mg/Kg	J		20	6020
7440-38-2	Arsenic	5.1	0.52	0.26	mg/Kg			20	6020
7440-39-3	Barium	81	0.52	0.26	mg/Kg			20	6020
7440-41-7	Beryllium	0.43	0.31	0.16	mg/Kg			20	6020
7440-43-9	Cadmium	ND	0.52	0.26	mg/Kg			20	6020
7440-47-3	Chromium	7.8	1.0	0.52	mg/Kg			20	6020
7440-48-4	Cobalt	4.5	0.52	0.22	mg/Kg			20	6020
7440-50-8	Copper	63	1.0	0.52	mg/Kg			20	6020
7439-92-1	Lead	3.7	0.52	0.26	mg/Kg			20	6020
7439-96-5	Manganese	210	0.52	0.26	mg/Kg			20	6020
7439-98-7	Molybdenum	0.53	1.0	0.52	mg/Kg	J		20	6020
7440-02-0	Nickel	5.5	1.0	0.52	mg/Kg			20	6020
7782-49-2	Selenium	1.5	1.0	0.21	mg/Kg			20	6020
7440-22-4	Silver	ND	0.52	0.10	mg/Kg			20	6020
7440-28-0	Thallium	ND	0.52	0.26	mg/Kg			20	6020
7440-62-2	Vanadium	32	1.0	0.52	mg/Kg			20	6020
7440-66-6	Zinc	24	10	5.2	mg/Kg			20	6020
7439-97-6	Mercury	ND	0.021	0.013	mg/Kg			1	7471A

1A-IN  
INORGANIC ANALYSIS DATA SHEET  
METALS

Client Sample ID: WRSB208\_15-25

Lab Sample ID: 440-258875-5

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG ID.:

Date Sampled: 01/07/2020 11:53

Matrix: Solid

Date Received: 01/10/2020 10:00

Reporting Basis: DRY

% Solids: 95.8

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	8300	10	8.0	mg/Kg			5	6010B
7440-42-8	Boron	5.4	5.2	2.6	mg/Kg			5	6010B
7440-70-2	Calcium	6600	26	14	mg/Kg			5	6010B
7439-89-6	Iron	16000	10	7.2	mg/Kg			5	6010B
7439-93-2	Lithium	8.7	5.2	2.9	mg/Kg			5	6010B
7439-95-4	Magnesium	3500	10	5.2	mg/Kg			5	6010B
7723-14-0	Phosphorus	500	5.2	2.6	mg/Kg			5	6010B
7440-09-7	Potassium	1300	65	34	mg/Kg			5	6010B
7440-23-5	Sodium	530	65	33	mg/Kg			5	6010B
7440-24-6	Strontium	59	5.2	2.6	mg/Kg			5	6010B
7440-31-5	Tin	ND	10	5.2	mg/Kg			5	6010B
7440-32-6	Titanium	380	2.1	1.0	mg/Kg			5	6010B
7440-36-0	Antimony	0.43	1.0	0.28	mg/Kg	J		20	6020
7440-38-2	Arsenic	6.3	0.52	0.26	mg/Kg			20	6020
7440-39-3	Barium	91	0.52	0.26	mg/Kg			20	6020
7440-41-7	Beryllium	0.41	0.31	0.16	mg/Kg			20	6020
7440-43-9	Cadmium	ND	0.52	0.26	mg/Kg			20	6020
7440-47-3	Chromium	8.7	1.0	0.52	mg/Kg			20	6020
7440-48-4	Cobalt	4.6	0.52	0.22	mg/Kg			20	6020
7440-50-8	Copper	110	1.0	0.52	mg/Kg			20	6020
7439-92-1	Lead	8.3	0.52	0.26	mg/Kg			20	6020
7439-96-5	Manganese	270	0.52	0.26	mg/Kg			20	6020
7439-98-7	Molybdenum	1.5	1.0	0.52	mg/Kg			20	6020
7440-02-0	Nickel	5.8	1.0	0.52	mg/Kg			20	6020
7782-49-2	Selenium	1.6	1.0	0.21	mg/Kg			20	6020
7440-22-4	Silver	ND	0.52	0.10	mg/Kg			20	6020
7440-28-0	Thallium	ND	0.52	0.26	mg/Kg			20	6020
7440-62-2	Vanadium	36	1.0	0.52	mg/Kg			20	6020
7440-66-6	Zinc	25	10	5.2	mg/Kg			20	6020
7439-97-6	Mercury	ND	0.020	0.012	mg/Kg			1	7471A

1A-IN  
INORGANIC ANALYSIS DATA SHEET  
METALS

Client Sample ID: WRSB208-FD\_15-25

Lab Sample ID: 440-258875-6

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG ID.:

Date Sampled: 01/07/2020 11:58

Matrix: Solid

Date Received: 01/10/2020 10:00

Reporting Basis: DRY

% Solids: 96.0

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	8100	10	7.9	mg/Kg			5	6010B
7440-42-8	Boron	4.9	5.1	2.6	mg/Kg	J		5	6010B
7440-70-2	Calcium	6900	26	14	mg/Kg			5	6010B
7439-89-6	Iron	15000	10	7.0	mg/Kg			5	6010B
7439-93-2	Lithium	7.9	5.1	2.9	mg/Kg			5	6010B
7439-95-4	Magnesium	3500	10	5.1	mg/Kg			5	6010B
7723-14-0	Phosphorus	500	5.1	2.6	mg/Kg			5	6010B
7440-09-7	Potassium	1300	64	33	mg/Kg			5	6010B
7440-23-5	Sodium	520	64	33	mg/Kg			5	6010B
7440-24-6	Strontium	61	5.1	2.6	mg/Kg			5	6010B
7440-31-5	Tin	ND	10	5.1	mg/Kg			5	6010B
7440-32-6	Titanium	330	2.0	1.0	mg/Kg			5	6010B
7440-36-0	Antimony	0.37	1.0	0.28	mg/Kg	J		20	6020
7440-38-2	Arsenic	5.7	0.51	0.26	mg/Kg			20	6020
7440-39-3	Barium	85	0.51	0.26	mg/Kg			20	6020
7440-41-7	Beryllium	0.42	0.31	0.15	mg/Kg			20	6020
7440-43-9	Cadmium	ND	0.51	0.26	mg/Kg			20	6020
7440-47-3	Chromium	7.9	1.0	0.51	mg/Kg			20	6020
7440-48-4	Cobalt	5.0	0.51	0.21	mg/Kg			20	6020
7440-50-8	Copper	110	1.0	0.51	mg/Kg			20	6020
7439-92-1	Lead	7.3	0.51	0.26	mg/Kg			20	6020
7439-96-5	Manganese	280	0.51	0.26	mg/Kg			20	6020
7439-98-7	Molybdenum	1.3	1.0	0.51	mg/Kg			20	6020
7440-02-0	Nickel	5.9	1.0	0.51	mg/Kg			20	6020
7782-49-2	Selenium	1.4	1.0	0.20	mg/Kg			20	6020
7440-22-4	Silver	ND	0.51	0.10	mg/Kg			20	6020
7440-28-0	Thallium	ND	0.51	0.26	mg/Kg			20	6020
7440-62-2	Vanadium	34	1.0	0.51	mg/Kg			20	6020
7440-66-6	Zinc	23	10	5.1	mg/Kg			20	6020
7439-97-6	Mercury	ND	0.021	0.013	mg/Kg			1	7471A

1A-IN  
INORGANIC ANALYSIS DATA SHEET  
METALS

Client Sample ID: WRSB208\_25-35

Lab Sample ID: 440-258875-7

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG ID.:

Date Sampled: 01/07/2020 12:10

Matrix: Solid

Date Received: 01/10/2020 10:00

Reporting Basis: DRY

% Solids: 96.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	8600	11	8.1	mg/Kg			5	6010B
7440-42-8	Boron	5.7	5.3	2.6	mg/Kg			5	6010B
7440-70-2	Calcium	9600	26	14	mg/Kg			5	6010B
7439-89-6	Iron	15000	11	7.3	mg/Kg			5	6010B
7439-93-2	Lithium	7.8	5.3	2.9	mg/Kg			5	6010B
7439-95-4	Magnesium	3300	11	5.3	mg/Kg			5	6010B
7723-14-0	Phosphorus	510	5.3	2.6	mg/Kg			5	6010B
7440-09-7	Potassium	1500	66	34	mg/Kg			5	6010B
7440-23-5	Sodium	570	66	34	mg/Kg			5	6010B
7440-24-6	Strontium	62	5.3	2.6	mg/Kg			5	6010B
7440-31-5	Tin	ND	11	5.3	mg/Kg			5	6010B
7440-32-6	Titanium	390	2.1	1.1	mg/Kg			5	6010B
7440-36-0	Antimony	0.37	1.1	0.28	mg/Kg	J		20	6020
7440-38-2	Arsenic	6.0	0.53	0.26	mg/Kg			20	6020
7440-39-3	Barium	94	0.53	0.26	mg/Kg			20	6020
7440-41-7	Beryllium	0.35	0.32	0.16	mg/Kg			20	6020
7440-43-9	Cadmium	ND	0.53	0.26	mg/Kg			20	6020
7440-47-3	Chromium	10	1.1	0.53	mg/Kg			20	6020
7440-48-4	Cobalt	4.7	0.53	0.22	mg/Kg			20	6020
7440-50-8	Copper	130	1.1	0.53	mg/Kg			20	6020
7439-92-1	Lead	5.6	0.53	0.26	mg/Kg			20	6020
7439-96-5	Manganese	270	0.53	0.26	mg/Kg			20	6020
7439-98-7	Molybdenum	1.7	1.1	0.53	mg/Kg			20	6020
7440-02-0	Nickel	5.9	1.1	0.53	mg/Kg			20	6020
7782-49-2	Selenium	1.3	1.1	0.21	mg/Kg			20	6020
7440-22-4	Silver	ND	0.53	0.11	mg/Kg			20	6020
7440-28-0	Thallium	ND	0.53	0.26	mg/Kg			20	6020
7440-62-2	Vanadium	34	1.1	0.53	mg/Kg			20	6020
7440-66-6	Zinc	26	11	5.3	mg/Kg			20	6020
7439-97-6	Mercury	0.026	0.021	0.013	mg/Kg			1	7471A

1A-IN  
INORGANIC ANALYSIS DATA SHEET  
METALS

Client Sample ID: WRSB208\_35-45

Lab Sample ID: 440-258875-8

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG ID.:

Date Sampled: 01/07/2020 12:21

Matrix: Solid

Date Received: 01/10/2020 10:00

Reporting Basis: DRY

% Solids: 97.7

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	8900	10	8.0	mg/Kg			5	6010B
7440-42-8	Boron	4.7	5.2	2.6	mg/Kg	J		5	6010B
7440-70-2	Calcium	6200	26	14	mg/Kg			5	6010B
7439-89-6	Iron	15000	10	7.2	mg/Kg			5	6010B
7439-93-2	Lithium	8.0	5.2	2.9	mg/Kg			5	6010B
7439-95-4	Magnesium	3600	10	5.2	mg/Kg			5	6010B
7723-14-0	Phosphorus	540	5.2	2.6	mg/Kg			5	6010B
7440-09-7	Potassium	1400	65	34	mg/Kg			5	6010B
7440-23-5	Sodium	630	65	33	mg/Kg			5	6010B
7440-24-6	Strontium	67	5.2	2.6	mg/Kg			5	6010B
7440-31-5	Tin	ND	10	5.2	mg/Kg			5	6010B
7440-32-6	Titanium	370	2.1	1.0	mg/Kg			5	6010B
7440-36-0	Antimony	0.39	1.0	0.28	mg/Kg	J		20	6020
7440-38-2	Arsenic	5.0	0.52	0.26	mg/Kg			20	6020
7440-39-3	Barium	100	0.52	0.26	mg/Kg			20	6020
7440-41-7	Beryllium	0.43	0.31	0.16	mg/Kg			20	6020
7440-43-9	Cadmium	ND	0.52	0.26	mg/Kg			20	6020
7440-47-3	Chromium	11	1.0	0.52	mg/Kg			20	6020
7440-48-4	Cobalt	4.5	0.52	0.22	mg/Kg			20	6020
7440-50-8	Copper	68	1.0	0.52	mg/Kg			20	6020
7439-92-1	Lead	6.3	0.52	0.26	mg/Kg			20	6020
7439-96-5	Manganese	320	0.52	0.26	mg/Kg			20	6020
7439-98-7	Molybdenum	1.5	1.0	0.52	mg/Kg			20	6020
7440-02-0	Nickel	6.1	1.0	0.52	mg/Kg			20	6020
7782-49-2	Selenium	1.5	1.0	0.21	mg/Kg			20	6020
7440-22-4	Silver	ND	0.52	0.10	mg/Kg			20	6020
7440-28-0	Thallium	ND	0.52	0.26	mg/Kg			20	6020
7440-62-2	Vanadium	33	1.0	0.52	mg/Kg			20	6020
7440-66-6	Zinc	27	10	5.2	mg/Kg			20	6020
7439-97-6	Mercury	ND	0.020	0.012	mg/Kg			1	7471A

1A-IN  
INORGANIC ANALYSIS DATA SHEET  
METALS

Client Sample ID: WRSB208\_45-55

Lab Sample ID: 440-258875-9

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG ID.:

Date Sampled: 01/07/2020 14:16

Matrix: Solid

Date Received: 01/10/2020 10:00

Reporting Basis: DRY

% Solids: 95.1

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	9000	11	8.2	mg/Kg			5	6010B
7440-42-8	Boron	4.6	5.3	2.7	mg/Kg	J		5	6010B
7440-70-2	Calcium	6700	27	14	mg/Kg			5	6010B
7439-89-6	Iron	14000	11	7.4	mg/Kg			5	6010B
7439-93-2	Lithium	8.0	5.3	3.0	mg/Kg			5	6010B
7439-95-4	Magnesium	3300	11	5.3	mg/Kg			5	6010B
7723-14-0	Phosphorus	420	5.3	2.7	mg/Kg			5	6010B
7440-09-7	Potassium	1500	67	35	mg/Kg			5	6010B
7440-23-5	Sodium	610	67	34	mg/Kg			5	6010B
7440-24-6	Strontium	74	5.3	2.7	mg/Kg			5	6010B
7440-31-5	Tin	ND	11	5.3	mg/Kg			5	6010B
7440-32-6	Titanium	320	2.1	1.1	mg/Kg			5	6010B
7440-36-0	Antimony	0.33	1.1	0.29	mg/Kg	J		20	6020
7440-38-2	Arsenic	4.7	0.53	0.27	mg/Kg			20	6020
7440-39-3	Barium	110	0.53	0.27	mg/Kg			20	6020
7440-41-7	Beryllium	0.54	0.32	0.16	mg/Kg			20	6020
7440-43-9	Cadmium	ND	0.53	0.27	mg/Kg			20	6020
7440-47-3	Chromium	9.1	1.1	0.53	mg/Kg			20	6020
7440-48-4	Cobalt	4.5	0.53	0.22	mg/Kg			20	6020
7440-50-8	Copper	49	1.1	0.53	mg/Kg			20	6020
7439-92-1	Lead	5.4	0.53	0.27	mg/Kg			20	6020
7439-96-5	Manganese	300	0.53	0.27	mg/Kg			20	6020
7439-98-7	Molybdenum	1.2	1.1	0.53	mg/Kg			20	6020
7440-02-0	Nickel	5.3	1.1	0.53	mg/Kg			20	6020
7782-49-2	Selenium	1.6	1.1	0.21	mg/Kg			20	6020
7440-22-4	Silver	ND	0.53	0.11	mg/Kg			20	6020
7440-28-0	Thallium	ND	0.53	0.27	mg/Kg			20	6020
7440-62-2	Vanadium	33	1.1	0.53	mg/Kg			20	6020
7440-66-6	Zinc	28	11	5.3	mg/Kg			20	6020
7439-97-6	Mercury	ND	0.021	0.013	mg/Kg			1	7471A

1A-IN  
INORGANIC ANALYSIS DATA SHEET  
METALS

Client Sample ID: WRSB208\_55-65

Lab Sample ID: 440-258875-11

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG ID.:

Date Sampled: 01/07/2020 14:33

Matrix: Solid

Date Received: 01/10/2020 10:00

Reporting Basis: DRY

% Solids: 95.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	9200	11	8.2	mg/Kg			5	6010B
7440-42-8	Boron	4.8	5.3	2.7	mg/Kg	J		5	6010B
7440-70-2	Calcium	5500	27	14	mg/Kg			5	6010B
7439-89-6	Iron	16000	11	7.4	mg/Kg			5	6010B
7439-93-2	Lithium	8.0	5.3	3.0	mg/Kg			5	6010B
7439-95-4	Magnesium	3300	11	5.3	mg/Kg			5	6010B
7723-14-0	Phosphorus	430	5.3	2.7	mg/Kg			5	6010B
7440-09-7	Potassium	1500	67	35	mg/Kg			5	6010B
7440-23-5	Sodium	600	67	34	mg/Kg			5	6010B
7440-24-6	Strontium	61	5.3	2.7	mg/Kg			5	6010B
7440-31-5	Tin	ND	11	5.3	mg/Kg			5	6010B
7440-32-6	Titanium	380	2.1	1.1	mg/Kg			5	6010B
7440-36-0	Antimony	0.34	1.1	0.29	mg/Kg	J		20	6020
7440-38-2	Arsenic	4.7	0.53	0.27	mg/Kg			20	6020
7440-39-3	Barium	99	0.53	0.27	mg/Kg			20	6020
7440-41-7	Beryllium	0.48	0.32	0.16	mg/Kg			20	6020
7440-43-9	Cadmium	ND	0.53	0.27	mg/Kg			20	6020
7440-47-3	Chromium	9.8	1.1	0.53	mg/Kg			20	6020
7440-48-4	Cobalt	4.4	0.53	0.22	mg/Kg			20	6020
7440-50-8	Copper	62	1.1	0.53	mg/Kg			20	6020
7439-92-1	Lead	5.3	0.53	0.27	mg/Kg			20	6020
7439-96-5	Manganese	300	0.53	0.27	mg/Kg			20	6020
7439-98-7	Molybdenum	1.6	1.1	0.53	mg/Kg			20	6020
7440-02-0	Nickel	5.7	1.1	0.53	mg/Kg			20	6020
7782-49-2	Selenium	1.9	1.1	0.21	mg/Kg			20	6020
7440-22-4	Silver	ND	0.53	0.11	mg/Kg			20	6020
7440-28-0	Thallium	ND	0.53	0.27	mg/Kg			20	6020
7440-62-2	Vanadium	32	1.1	0.53	mg/Kg			20	6020
7440-66-6	Zinc	28	11	5.3	mg/Kg			20	6020
7439-97-6	Mercury	ND	0.021	0.013	mg/Kg			1	7471A

1A-IN  
INORGANIC ANALYSIS DATA SHEET  
METALS

Client Sample ID: WRSB208\_65-75

Lab Sample ID: 440-258875-12

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG ID.:

Date Sampled: 01/07/2020 14:53

Matrix: Solid

Date Received: 01/10/2020 10:00

Reporting Basis: DRY

% Solids: 95.2

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	8900	11	8.2	mg/Kg			5	6010B
7440-42-8	Boron	4.6	5.3	2.7	mg/Kg	J		5	6010B
7440-70-2	Calcium	5100	27	14	mg/Kg			5	6010B
7439-89-6	Iron	15000	11	7.3	mg/Kg			5	6010B
7439-93-2	Lithium	7.7	5.3	3.0	mg/Kg			5	6010B
7439-95-4	Magnesium	3100	11	5.3	mg/Kg			5	6010B
7723-14-0	Phosphorus	440	5.3	2.7	mg/Kg			5	6010B
7440-09-7	Potassium	1500	66	34	mg/Kg			5	6010B
7440-23-5	Sodium	590	66	34	mg/Kg			5	6010B
7440-24-6	Strontium	64	5.3	2.7	mg/Kg			5	6010B
7440-31-5	Tin	ND	11	5.3	mg/Kg			5	6010B
7440-32-6	Titanium	380	2.1	1.1	mg/Kg			5	6010B
7440-36-0	Antimony	0.32	1.1	0.29	mg/Kg	J		20	6020
7440-38-2	Arsenic	4.9	0.53	0.27	mg/Kg			20	6020
7440-39-3	Barium	110	0.53	0.27	mg/Kg			20	6020
7440-41-7	Beryllium	0.44	0.32	0.16	mg/Kg			20	6020
7440-43-9	Cadmium	ND	0.53	0.27	mg/Kg			20	6020
7440-47-3	Chromium	11	1.1	0.53	mg/Kg			20	6020
7440-48-4	Cobalt	4.5	0.53	0.22	mg/Kg			20	6020
7440-50-8	Copper	45	1.1	0.53	mg/Kg			20	6020
7439-92-1	Lead	5.3	0.53	0.27	mg/Kg			20	6020
7439-96-5	Manganese	330	0.53	0.27	mg/Kg			20	6020
7439-98-7	Molybdenum	1.3	1.1	0.53	mg/Kg			20	6020
7440-02-0	Nickel	5.3	1.1	0.53	mg/Kg			20	6020
7782-49-2	Selenium	1.9	1.1	0.21	mg/Kg			20	6020
7440-22-4	Silver	ND	0.53	0.11	mg/Kg			20	6020
7440-28-0	Thallium	ND	0.53	0.27	mg/Kg			20	6020
7440-62-2	Vanadium	34	1.1	0.53	mg/Kg			20	6020
7440-66-6	Zinc	29	11	5.3	mg/Kg			20	6020
7439-97-6	Mercury	ND	0.021	0.013	mg/Kg			1	7471A

1A-IN  
INORGANIC ANALYSIS DATA SHEET  
METALS

Client Sample ID: WRSB208-FD\_65-75

Lab Sample ID: 440-258875-13

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG ID.:

Date Sampled: 01/07/2020 15:03

Matrix: Solid

Date Received: 01/10/2020 10:00

Reporting Basis: DRY

% Solids: 95.1

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	9200	11	8.1	mg/Kg			5	6010B
7440-42-8	Boron	4.7	5.3	2.6	mg/Kg	J		5	6010B
7440-70-2	Calcium	5600	26	14	mg/Kg			5	6010B
7439-89-6	Iron	16000	11	7.3	mg/Kg			5	6010B
7439-93-2	Lithium	8.3	5.3	2.9	mg/Kg			5	6010B
7439-95-4	Magnesium	3100	11	5.3	mg/Kg			5	6010B
7723-14-0	Phosphorus	420	5.3	2.6	mg/Kg			5	6010B
7440-09-7	Potassium	1500	66	34	mg/Kg			5	6010B
7440-23-5	Sodium	600	66	34	mg/Kg			5	6010B
7440-24-6	Strontium	61	5.3	2.6	mg/Kg			5	6010B
7440-31-5	Tin	ND	11	5.3	mg/Kg			5	6010B
7440-32-6	Titanium	410	2.1	1.1	mg/Kg			5	6010B
7440-36-0	Antimony	0.43	1.1	0.28	mg/Kg	J		20	6020
7440-38-2	Arsenic	6.5	0.53	0.26	mg/Kg			20	6020
7440-39-3	Barium	97	0.53	0.26	mg/Kg			20	6020
7440-41-7	Beryllium	0.45	0.32	0.16	mg/Kg			20	6020
7440-43-9	Cadmium	ND	0.53	0.26	mg/Kg			20	6020
7440-47-3	Chromium	11	1.1	0.53	mg/Kg			20	6020
7440-48-4	Cobalt	4.2	0.53	0.22	mg/Kg			20	6020
7440-50-8	Copper	37	1.1	0.53	mg/Kg			20	6020
7439-92-1	Lead	5.4	0.53	0.26	mg/Kg			20	6020
7439-96-5	Manganese	300	0.53	0.26	mg/Kg			20	6020
7439-98-7	Molybdenum	1.3	1.1	0.53	mg/Kg			20	6020
7440-02-0	Nickel	5.1	1.1	0.53	mg/Kg			20	6020
7782-49-2	Selenium	1.6	1.1	0.21	mg/Kg			20	6020
7440-22-4	Silver	ND	0.53	0.11	mg/Kg			20	6020
7440-28-0	Thallium	ND	0.53	0.26	mg/Kg			20	6020
7440-62-2	Vanadium	34	1.1	0.53	mg/Kg			20	6020
7440-66-6	Zinc	29	11	5.3	mg/Kg			20	6020
7439-97-6	Mercury	ND	0.021	0.012	mg/Kg			1	7471A

1A-IN  
INORGANIC ANALYSIS DATA SHEET  
METALS

Client Sample ID: WRSB208\_75-85

Lab Sample ID: 440-258875-14

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG ID.:

Date Sampled: 01/07/2020 15:17

Matrix: Solid

Date Received: 01/10/2020 10:00

Reporting Basis: DRY

% Solids: 94.2

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	8800	11	8.3	mg/Kg			5	6010B
7440-42-8	Boron	4.5	5.4	2.7	mg/Kg	J		5	6010B
7440-70-2	Calcium	4800	27	15	mg/Kg			5	6010B
7439-89-6	Iron	15000	11	7.5	mg/Kg			5	6010B
7439-93-2	Lithium	8.2	5.4	3.0	mg/Kg			5	6010B
7439-95-4	Magnesium	3000	11	5.4	mg/Kg			5	6010B
7723-14-0	Phosphorus	430	5.4	2.7	mg/Kg			5	6010B
7440-09-7	Potassium	1500	68	35	mg/Kg			5	6010B
7440-23-5	Sodium	630	68	35	mg/Kg			5	6010B
7440-24-6	Strontium	66	5.4	2.7	mg/Kg			5	6010B
7440-31-5	Tin	ND	11	5.4	mg/Kg			5	6010B
7440-32-6	Titanium	400	2.2	1.1	mg/Kg			5	6010B
7440-36-0	Antimony	0.39	1.1	0.29	mg/Kg	J		20	6020
7440-38-2	Arsenic	4.6	0.54	0.27	mg/Kg			20	6020
7440-39-3	Barium	110	0.54	0.27	mg/Kg			20	6020
7440-41-7	Beryllium	0.51	0.32	0.16	mg/Kg			20	6020
7440-43-9	Cadmium	ND	0.54	0.27	mg/Kg			20	6020
7440-47-3	Chromium	9.2	1.1	0.54	mg/Kg			20	6020
7440-48-4	Cobalt	4.5	0.54	0.23	mg/Kg			20	6020
7440-50-8	Copper	33	1.1	0.54	mg/Kg			20	6020
7439-92-1	Lead	5.6	0.54	0.27	mg/Kg			20	6020
7439-96-5	Manganese	340	0.54	0.27	mg/Kg			20	6020
7439-98-7	Molybdenum	0.75	1.1	0.54	mg/Kg	J		20	6020
7440-02-0	Nickel	5.3	1.1	0.54	mg/Kg			20	6020
7782-49-2	Selenium	1.6	1.1	0.22	mg/Kg			20	6020
7440-22-4	Silver	ND	0.54	0.11	mg/Kg			20	6020
7440-28-0	Thallium	ND	0.54	0.27	mg/Kg			20	6020
7440-62-2	Vanadium	33	1.1	0.54	mg/Kg			20	6020
7440-66-6	Zinc	28	11	5.4	mg/Kg			20	6020
7439-97-6	Mercury	ND	0.021	0.013	mg/Kg			1	7471A

1A-IN  
INORGANIC ANALYSIS DATA SHEET  
METALS

Client Sample ID: WRSB208\_85-95

Lab Sample ID: 440-258875-15

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG ID.:

Date Sampled: 01/07/2020 15:50

Matrix: Solid

Date Received: 01/10/2020 10:00

Reporting Basis: DRY

% Solids: 94.3

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	8700	11	8.2	mg/Kg			5	6010B
7440-42-8	Boron	4.3	5.3	2.7	mg/Kg	J		5	6010B
7440-70-2	Calcium	5300	27	14	mg/Kg			5	6010B
7439-89-6	Iron	14000	11	7.4	mg/Kg			5	6010B
7439-93-2	Lithium	7.7	5.3	3.0	mg/Kg			5	6010B
7439-95-4	Magnesium	3100	11	5.3	mg/Kg			5	6010B
7723-14-0	Phosphorus	430	5.3	2.7	mg/Kg			5	6010B
7440-09-7	Potassium	1500	67	35	mg/Kg			5	6010B
7440-23-5	Sodium	740	67	34	mg/Kg			5	6010B
7440-24-6	Strontium	87	5.3	2.7	mg/Kg			5	6010B
7440-31-5	Tin	ND	11	5.3	mg/Kg			5	6010B
7440-32-6	Titanium	320	2.1	1.1	mg/Kg			5	6010B
7440-36-0	Antimony	0.39	1.1	0.29	mg/Kg	J		20	6020
7440-38-2	Arsenic	6.1	0.53	0.27	mg/Kg			20	6020
7440-39-3	Barium	170	0.53	0.27	mg/Kg			20	6020
7440-41-7	Beryllium	0.49	0.32	0.16	mg/Kg			20	6020
7440-43-9	Cadmium	ND	0.53	0.27	mg/Kg			20	6020
7440-47-3	Chromium	8.4	1.1	0.53	mg/Kg			20	6020
7440-48-4	Cobalt	4.3	0.53	0.22	mg/Kg			20	6020
7440-50-8	Copper	37	1.1	0.53	mg/Kg			20	6020
7439-92-1	Lead	5.1	0.53	0.27	mg/Kg			20	6020
7439-96-5	Manganese	300	0.53	0.27	mg/Kg			20	6020
7439-98-7	Molybdenum	0.70	1.1	0.53	mg/Kg	J		20	6020
7440-02-0	Nickel	5.1	1.1	0.53	mg/Kg			20	6020
7782-49-2	Selenium	1.9	1.1	0.21	mg/Kg			20	6020
7440-22-4	Silver	ND	0.53	0.11	mg/Kg			20	6020
7440-28-0	Thallium	ND	0.53	0.27	mg/Kg			20	6020
7440-62-2	Vanadium	33	1.1	0.53	mg/Kg			20	6020
7440-66-6	Zinc	29	11	5.3	mg/Kg			20	6020
7439-97-6	Mercury	ND	0.022	0.013	mg/Kg			1	7471A

1A-IN  
INORGANIC ANALYSIS DATA SHEET  
METALS

Client Sample ID: WRSB208\_95-105

Lab Sample ID: 440-258875-16

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG ID.:

Date Sampled: 01/08/2020 12:06

Matrix: Solid

Date Received: 01/10/2020 10:00

Reporting Basis: DRY

% Solids: 94.1

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	8400	11	8.2	mg/Kg			5	6010B
7440-42-8	Boron	4.9	5.3	2.7	mg/Kg	J		5	6010B
7440-70-2	Calcium	6100	27	14	mg/Kg			5	6010B
7439-89-6	Iron	14000	11	7.4	mg/Kg			5	6010B
7439-93-2	Lithium	8.1	5.3	3.0	mg/Kg			5	6010B
7439-95-4	Magnesium	3200	11	5.3	mg/Kg			5	6010B
7723-14-0	Phosphorus	460	5.3	2.7	mg/Kg			5	6010B
7440-09-7	Potassium	1400	67	35	mg/Kg			5	6010B
7440-23-5	Sodium	730	67	34	mg/Kg			5	6010B
7440-24-6	Strontium	58	5.3	2.7	mg/Kg			5	6010B
7440-31-5	Tin	ND	11	5.3	mg/Kg			5	6010B
7440-32-6	Titanium	300	2.1	1.1	mg/Kg			5	6010B
7440-36-0	Antimony	0.32	1.1	0.29	mg/Kg	J		20	6020
7440-38-2	Arsenic	5.2	0.53	0.27	mg/Kg			20	6020
7440-39-3	Barium	96	0.53	0.27	mg/Kg			20	6020
7440-41-7	Beryllium	0.45	0.32	0.16	mg/Kg			20	6020
7440-43-9	Cadmium	ND	0.53	0.27	mg/Kg			20	6020
7440-47-3	Chromium	8.5	1.1	0.53	mg/Kg			20	6020
7440-48-4	Cobalt	4.2	0.53	0.22	mg/Kg			20	6020
7440-50-8	Copper	44	1.1	0.53	mg/Kg			20	6020
7439-92-1	Lead	4.9	0.53	0.27	mg/Kg			20	6020
7439-96-5	Manganese	280	0.53	0.27	mg/Kg			20	6020
7439-98-7	Molybdenum	0.74	1.1	0.53	mg/Kg	J		20	6020
7440-02-0	Nickel	4.9	1.1	0.53	mg/Kg			20	6020
7782-49-2	Selenium	1.6	1.1	0.21	mg/Kg			20	6020
7440-22-4	Silver	ND	0.53	0.11	mg/Kg			20	6020
7440-28-0	Thallium	ND	0.53	0.27	mg/Kg			20	6020
7440-62-2	Vanadium	32	1.1	0.53	mg/Kg			20	6020
7440-66-6	Zinc	27	11	5.3	mg/Kg			20	6020
7439-97-6	Mercury	ND	0.021	0.013	mg/Kg			1	7471A

1A-IN  
INORGANIC ANALYSIS DATA SHEET  
METALS

Client Sample ID: WRSB208\_105-115

Lab Sample ID: 440-258875-17

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG ID.:

Date Sampled: 01/08/2020 12:23

Matrix: Solid

Date Received: 01/10/2020 10:00

Reporting Basis: DRY

% Solids: 94.8

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	9100	11	8.2	mg/Kg			5	6010B
7440-42-8	Boron	7.7	5.3	2.7	mg/Kg			5	6010B
7440-70-2	Calcium	7300	27	14	mg/Kg			5	6010B
7439-89-6	Iron	15000	11	7.4	mg/Kg			5	6010B
7439-93-2	Lithium	9.6	5.3	3.0	mg/Kg			5	6010B
7439-95-4	Magnesium	3500	11	5.3	mg/Kg			5	6010B
7723-14-0	Phosphorus	560	5.3	2.7	mg/Kg			5	6010B
7440-09-7	Potassium	1600	67	35	mg/Kg			5	6010B
7440-23-5	Sodium	980	67	34	mg/Kg			5	6010B
7440-24-6	Strontium	87	5.3	2.7	mg/Kg			5	6010B
7440-31-5	Tin	ND	11	5.3	mg/Kg			5	6010B
7440-32-6	Titanium	380	2.1	1.1	mg/Kg			5	6010B
7440-36-0	Antimony	0.32	1.1	0.29	mg/Kg	J		20	6020
7440-38-2	Arsenic	6.6	0.53	0.27	mg/Kg			20	6020
7440-39-3	Barium	120	0.53	0.27	mg/Kg			20	6020
7440-41-7	Beryllium	0.40	0.32	0.16	mg/Kg			20	6020
7440-43-9	Cadmium	ND	0.53	0.27	mg/Kg			20	6020
7440-47-3	Chromium	8.9	1.1	0.53	mg/Kg			20	6020
7440-48-4	Cobalt	6.0	0.53	0.22	mg/Kg			20	6020
7440-50-8	Copper	78	1.1	0.53	mg/Kg			20	6020
7439-92-1	Lead	5.6	0.53	0.27	mg/Kg			20	6020
7439-96-5	Manganese	360	0.53	0.27	mg/Kg			20	6020
7439-98-7	Molybdenum	1.1	1.1	0.53	mg/Kg			20	6020
7440-02-0	Nickel	5.6	1.1	0.53	mg/Kg			20	6020
7782-49-2	Selenium	1.6	1.1	0.21	mg/Kg			20	6020
7440-22-4	Silver	ND	0.53	0.11	mg/Kg			20	6020
7440-28-0	Thallium	ND	0.53	0.27	mg/Kg			20	6020
7440-62-2	Vanadium	34	1.1	0.53	mg/Kg			20	6020
7440-66-6	Zinc	25	11	5.3	mg/Kg			20	6020
7439-97-6	Mercury	ND	0.021	0.013	mg/Kg			1	7471A

1A-IN  
INORGANIC ANALYSIS DATA SHEET  
METALS

Client Sample ID: WRSB208\_115-125

Lab Sample ID: 440-258875-19

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG ID.:

Date Sampled: 01/08/2020 12:42

Matrix: Solid

Date Received: 01/10/2020 10:00

Reporting Basis: DRY

% Solids: 95.5

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	8400	11	8.2	mg/Kg			5	6010B
7440-42-8	Boron	9.6	5.3	2.7	mg/Kg			5	6010B
7440-70-2	Calcium	8300	27	14	mg/Kg			5	6010B
7439-89-6	Iron	14000	11	7.4	mg/Kg			5	6010B
7439-93-2	Lithium	10	5.3	3.0	mg/Kg			5	6010B
7439-95-4	Magnesium	3600	11	5.3	mg/Kg			5	6010B
7723-14-0	Phosphorus	550	5.3	2.7	mg/Kg			5	6010B
7440-09-7	Potassium	1400	67	35	mg/Kg			5	6010B
7440-23-5	Sodium	900	67	34	mg/Kg			5	6010B
7440-24-6	Strontium	64	5.3	2.7	mg/Kg			5	6010B
7440-31-5	Tin	ND	11	5.3	mg/Kg			5	6010B
7440-32-6	Titanium	420	2.1	1.1	mg/Kg			5	6010B
7440-36-0	Antimony	0.35	1.1	0.29	mg/Kg	J		20	6020
7440-38-2	Arsenic	6.6	0.53	0.27	mg/Kg			20	6020
7440-39-3	Barium	80	0.53	0.27	mg/Kg			20	6020
7440-41-7	Beryllium	0.30	0.32	0.16	mg/Kg	J		20	6020
7440-43-9	Cadmium	ND	0.53	0.27	mg/Kg			20	6020
7440-47-3	Chromium	9.0	1.1	0.53	mg/Kg			20	6020
7440-48-4	Cobalt	4.5	0.53	0.22	mg/Kg			20	6020
7440-50-8	Copper	93	1.1	0.53	mg/Kg			20	6020
7439-92-1	Lead	4.0	0.53	0.27	mg/Kg			20	6020
7439-96-5	Manganese	220	0.53	0.27	mg/Kg			20	6020
7439-98-7	Molybdenum	1.2	1.1	0.53	mg/Kg			20	6020
7440-02-0	Nickel	5.9	1.1	0.53	mg/Kg			20	6020
7782-49-2	Selenium	1.4	1.1	0.21	mg/Kg			20	6020
7440-22-4	Silver	ND	0.53	0.11	mg/Kg			20	6020
7440-28-0	Thallium	ND	0.53	0.27	mg/Kg			20	6020
7440-62-2	Vanadium	35	1.1	0.53	mg/Kg			20	6020
7440-66-6	Zinc	23	11	5.3	mg/Kg			20	6020
7439-97-6	Mercury	0.014	0.021	0.013	mg/Kg	J		1	7471A

1A-IN  
INORGANIC ANALYSIS DATA SHEET  
METALS

Client Sample ID: WRSB208\_125-131.5

Lab Sample ID: 440-258875-20

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG ID.:

Date Sampled: 01/08/2020 15:57

Matrix: Solid

Date Received: 01/10/2020 10:00

Reporting Basis: DRY

% Solids: 96.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	7800	10	7.9	mg/Kg			5	6010B
7440-42-8	Boron	6.9	5.1	2.6	mg/Kg			5	6010B
7440-70-2	Calcium	7000	26	14	mg/Kg			5	6010B
7439-89-6	Iron	14000	10	7.1	mg/Kg			5	6010B
7439-93-2	Lithium	8.7	5.1	2.9	mg/Kg			5	6010B
7439-95-4	Magnesium	3500	10	5.1	mg/Kg			5	6010B
7723-14-0	Phosphorus	520	5.1	2.6	mg/Kg			5	6010B
7440-09-7	Potassium	1300	64	33	mg/Kg			5	6010B
7440-23-5	Sodium	730	64	33	mg/Kg			5	6010B
7440-24-6	Strontium	55	5.1	2.6	mg/Kg			5	6010B
7440-31-5	Tin	ND	10	5.1	mg/Kg			5	6010B
7440-32-6	Titanium	390	2.1	1.0	mg/Kg			5	6010B
7440-36-0	Antimony	ND	1.0	0.28	mg/Kg			20	6020
7440-38-2	Arsenic	5.4	0.51	0.26	mg/Kg			20	6020
7440-39-3	Barium	74	0.51	0.26	mg/Kg			20	6020
7440-41-7	Beryllium	0.32	0.31	0.15	mg/Kg			20	6020
7440-43-9	Cadmium	ND	0.51	0.26	mg/Kg			20	6020
7440-47-3	Chromium	9.7	1.0	0.51	mg/Kg			20	6020
7440-48-4	Cobalt	4.4	0.51	0.22	mg/Kg			20	6020
7440-50-8	Copper	150	1.0	0.51	mg/Kg			20	6020
7439-92-1	Lead	3.6	0.51	0.26	mg/Kg			20	6020
7439-96-5	Manganese	200	0.51	0.26	mg/Kg			20	6020
7439-98-7	Molybdenum	1.2	1.0	0.51	mg/Kg			20	6020
7440-02-0	Nickel	5.7	1.0	0.51	mg/Kg			20	6020
7782-49-2	Selenium	1.0	1.0	0.21	mg/Kg			20	6020
7440-22-4	Silver	ND	0.51	0.10	mg/Kg			20	6020
7440-28-0	Thallium	ND	0.51	0.26	mg/Kg			20	6020
7440-62-2	Vanadium	32	1.0	0.51	mg/Kg			20	6020
7440-66-6	Zinc	22	10	5.1	mg/Kg			20	6020
7439-97-6	Mercury	ND	0.021	0.013	mg/Kg			1	7471A

2A-IN  
CALIBRATION VERIFICATIONS  
METALS

Lab Name: Eurofins Irvine Job No.: 440-258875-1  
SDG No.: \_\_\_\_\_  
ICV Source: ME ICP ICV2\_02382 Concentration Units: mg/L  
CCV Source: ME ICP STD3\_03095

Analyte	ICV 440-590755/6 01/15/2020 12:15				CCV 440-590755/58 01/15/2020 15:11				CCV 440-590755/69 01/15/2020 16:00			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
<b>Aluminum</b>	0.985		1.00	98	1.03		1.00	103	1.00		1.00	100
<b>Boron</b>	0.997		1.00	100	1.01		1.00	101	1.01		1.00	101
<b>Calcium</b>	5.01		5.00	100	5.01		5.00	100	5.03		5.00	101
<b>Iron</b>	1.01		1.00	101	1.06		1.00	106	1.02		1.00	102
<b>Lithium</b>	0.995		1.00	99	1.00		1.00	100	1.00		1.00	100
<b>Magnesium</b>	5.01		5.00	100	5.07		5.00	101	5.09		5.00	102
<b>Phosphorus</b>	2.06		2.00	103	1.02		1.00	102	1.01		1.00	101
<b>Potassium</b>	5.03		5.00	101	10.0		10.0	100	10.0		10.0	100
<b>Strontium</b>	0.991		1.00	99	1.00		1.00	100	1.01		1.00	101
<b>Tin</b>	1.96		2.00	98	1.01		1.00	101	1.00		1.00	100
<b>Titanium</b>	0.992		1.00	99	1.03		1.00	103	1.01		1.00	101

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.  
Italicized analytes were not requested for this sequence.

2A-IN  
CALIBRATION VERIFICATIONS  
METALS

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG No.: \_\_\_\_\_

ICV Source: ME ICP ICV2\_02382

Concentration Units: mg/L

CCV Source: ME ICP STD3\_03095

Analyte	CCV 440-590755/81 01/15/2020 16:34				CCV 440-590755/93 01/15/2020 17:19							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
<b>Aluminum</b>	1.01		1.00	101	0.999		1.00	100				
<b>Boron</b>	1.01		1.00	101	0.996		1.00	100				
<b>Calcium</b>	5.02		5.00	100	4.96		5.00	99				
<b>Iron</b>	1.03		1.00	103	1.02		1.00	102				
<b>Lithium</b>	1.00		1.00	100	0.995		1.00	99				
<b>Magnesium</b>	5.08		5.00	102	5.05		5.00	101				
<b>Phosphorus</b>	1.01		1.00	101	0.997		1.00	100				
<b>Potassium</b>	9.99		10.0	100	9.93		10.0	99				
<b>Strontium</b>	1.00		1.00	100	0.991		1.00	99				
<b>Tin</b>	1.01		1.00	101	0.985		1.00	98				
<b>Titanium</b>	1.02		1.00	102	1.01		1.00	101				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.  
Italicized analytes were not requested for this sequence.

2A-IN  
CALIBRATION VERIFICATIONS  
METALS

Lab Name: Eurofins Irvine Job No.: 440-258875-1

SDG No.: \_\_\_\_\_

ICV Source: ICV SODIUM\_00099 Concentration Units: mg/L

CCV Source: ME ICP STD3\_03095

Analyte	ICV 440-590755/8 01/15/2020 12:19				CCV 440-590755/58 01/15/2020 15:11				CCV 440-590755/69 01/15/2020 16:00			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
<b>Sodium</b>	4.94		5.00	99	9.96		10.0	100	10.0		10.0	100

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.  
Italicized analytes were not requested for this sequence.

2A-IN  
CALIBRATION VERIFICATIONS  
METALS

Lab Name: Eurofins Irvine Job No.: 440-258875-1

SDG No.: \_\_\_\_\_

ICV Source: ICV SODIUM\_00099 Concentration Units: mg/L

CCV Source: ME ICP STD3\_03095

Analyte	CCV 440-590755/81 01/15/2020 16:34				CCV 440-590755/93 01/15/2020 17:19							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
<b>Sodium</b>	9.93		10.0	99	9.87		10.0	99				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.  
Italicized analytes were not requested for this sequence.

2A-IN  
CALIBRATION VERIFICATIONS  
METALS

Lab Name: Eurofins Irvine Job No.: 440-258875-1  
SDG No.: \_\_\_\_\_  
ICV Source: MEICPMS ICV\_00323 Concentration Units: ug/L  
CCV Source: MEICPMS CCV\_00321

Analyte	ICV 440-590542/6 01/14/2020 14:58				CCV 440-590542/14 01/14/2020 15:33				CCV 440-590542/23 01/14/2020 16:00			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
<b>Antimony</b>	25.2		25.0	101	50.6		50.0	101	51.3		50.0	103
<b>Arsenic</b>	25.0		25.0	100	50.3		50.0	101	50.6		50.0	101
<b>Barium</b>	25.1		25.0	101	49.7		50.0	99	50.3		50.0	101
<b>Beryllium</b>	24.3		25.0	97	50.1		50.0	100	50.9		50.0	102
<b>Cadmium</b>	25.1		25.0	100	50.4		50.0	101	50.7		50.0	101
<b>Chromium</b>	24.9		25.0	100	50.6		50.0	101	50.3		50.0	101
<b>Cobalt</b>	25.1		25.0	100	50.5		50.0	101	50.5		50.0	101
<b>Copper</b>	24.7		25.0	99	50.3		50.0	101	50.2		50.0	100
<b>Lead</b>	24.4		25.0	98	48.6		50.0	97	49.1		50.0	98
<b>Manganese</b>	25.1		25.0	100	50.7		50.0	101	50.2		50.0	100
<b>Molybdenum</b>	25.1		25.0	101	50.2		50.0	100	50.9		50.0	102
<b>Nickel</b>	25.1		25.0	100	50.5		50.0	101	50.6		50.0	101
<b>Selenium</b>	24.7		25.0	99	51.6		50.0	103	51.4		50.0	103
<b>Silver</b>	25.4		25.0	102	50.7		50.0	101	51.1		50.0	102
<b>Thallium</b>	23.4		25.0	94	46.6		50.0	93	47.0		50.0	94
<b>Vanadium</b>	24.9		25.0	100	50.4		50.0	101	50.2		50.0	100
<b>Zinc</b>	24.8		25.0	99	50.0		50.0	100	50.5		50.0	101

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.  
Italicized analytes were not requested for this sequence.

2A-IN  
CALIBRATION VERIFICATIONS  
METALS

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG No.: \_\_\_\_\_

ICV Source: MEICPMS ICV\_00323

Concentration Units: ug/L

CCV Source: MEICPMS CCV\_00321

Analyte	CCV 440-590542/35 01/14/2020 16:38				CCV 440-590542/44 01/14/2020 17:02							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
<b>Antimony</b>	50.5		50.0	101	51.5		50.0	103				
<b>Arsenic</b>	50.5		50.0	101	50.4		50.0	101				
<b>Barium</b>	49.5		50.0	99	50.1		50.0	100				
<b>Beryllium</b>	50.0		50.0	100	49.9		50.0	100				
<b>Cadmium</b>	50.4		50.0	101	50.9		50.0	102				
<b>Chromium</b>	51.1		50.0	102	51.2		50.0	102				
<b>Cobalt</b>	50.8		50.0	102	51.2		50.0	102				
<b>Copper</b>	50.5		50.0	101	51.2		50.0	102				
<b>Lead</b>	48.6		50.0	97	49.7		50.0	99				
<b>Manganese</b>	50.7		50.0	101	51.0		50.0	102				
<b>Molybdenum</b>	50.6		50.0	101	51.0		50.0	102				
<b>Nickel</b>	50.6		50.0	101	51.3		50.0	103				
<b>Selenium</b>	50.4		50.0	101	51.2		50.0	102				
<b>Silver</b>	50.9		50.0	102	51.6		50.0	103				
<b>Thallium</b>	46.7		50.0	93	47.3		50.0	95				
<b>Vanadium</b>	50.9		50.0	102	51.1		50.0	102				
<b>Zinc</b>	50.4		50.0	101	50.8		50.0	102				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.  
Italicized analytes were not requested for this sequence.

2A-IN  
CALIBRATION VERIFICATIONS  
METALS

Lab Name: Eurofins Irvine Job No.: 440-258875-1

SDG No.: \_\_\_\_\_

ICV Source: ME 1 PPM HG1\_00419 Concentration Units: mg/Kg

CCV Source: ME 1 PPM HG1\_00418

Analyte	ICV 440-591352/1-A 01/20/2020 12:26				CCV 440-591352/3-A 01/20/2020 12:34				CCV 440-591352/3-A 01/20/2020 13:03			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
<b>Mercury</b>	0.380		0.400	95	0.393		0.400	98	0.382		0.400	95

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.  
Italicized analytes were not requested for this sequence.

2A-IN  
CALIBRATION VERIFICATIONS  
METALS

Lab Name: Eurofins Irvine Job No.: 440-258875-1

SDG No.: \_\_\_\_\_

ICV Source: ME 1 PPM HG1\_00419 Concentration Units: mg/Kg

CCV Source: ME 1 PPM HG1\_00418

Analyte	CCV 440-591352/3-A 01/20/2020 13:30				CCV 440-591352/3-A 01/20/2020 13:50							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
<b>Mercury</b>	0.385		0.400	96	0.392		0.400	98				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.  
Italicized analytes were not requested for this sequence.

2B-IN  
CRQL CHECK STANDARD  
METALS

Lab Name: Eurofins Irvine Job No.: 440-258875-1  
SDG No.: \_\_\_\_\_  
Method: 6010B Instrument ID: ICP8  
Lab Sample ID: CRI 440-590755/16 Concentration Units: mg/L  
CRQL Check Standard Source: ME ICP RL\_01153

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Aluminum	0.200	0.200		100	50-150
Boron	0.100	0.0994		99	50-150
Calcium	0.200	0.212		106	50-150
Iron	0.200	0.215		107	50-150
Lithium	0.100	0.0995	J	100	50-150
Magnesium	0.0400	0.0475		119	50-150
Phosphorus	0.400	0.423		106	50-150
Potassium	1.00	0.997		100	50-150
Sodium	1.00	0.994		99	50-150
Strontium	0.0400	0.0408		102	50-150
Tin	0.200	0.199		99	50-150
Titanium	0.0100	0.0102		102	50-150

Lab Sample ID: CRI 440-590755/95 Concentration Units: mg/L  
CRQL Check Standard Source: ME ICP RL\_01153

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Aluminum	0.200	0.196		98	50-150
Boron	0.100	0.100		100	50-150
Calcium	0.200	0.205		103	50-150
Iron	0.200	0.206		103	50-150
Lithium	0.100	0.103	J	103	50-150
Magnesium	0.0400	0.0430		108	50-150
Phosphorus	0.400	0.420		105	50-150
Potassium	1.00	1.03		103	50-150
Sodium	1.00	0.925		93	50-150
Strontium	0.0400	0.0409		102	50-150
Tin	0.200	0.194		97	50-150
Titanium	0.0100	0.0112		112	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

2B-IN  
CRQL CHECK STANDARD  
METALS

Lab Name: Eurofins Irvine Job No.: 440-258875-1  
SDG No.: \_\_\_\_\_  
Method: 6020 Instrument ID: ICPMS6  
Lab Sample ID: CRI 440-590542/10 Concentration Units: ug/L  
CRQL Check Standard Source: MEICPMS CRI1\_00326

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	1.00	1.02	J	102	50-150
Arsenic	1.00	0.995	J	100	50-150
Barium	1.00	0.965	J	97	50-150
Beryllium	0.500	0.508		102	50-150
Cadmium	1.00	1.01		101	50-150
Chromium	1.00	1.01	J	101	50-150
Cobalt	1.00	0.971	J	97	50-150
Copper	1.00	1.05	J	105	50-150
Lead	1.00	0.917	J	92	50-150
Manganese	1.00	0.972	J	97	50-150
Molybdenum	1.00	0.958	J	96	50-150
Nickel	1.00	1.01	J	101	50-150
Selenium	1.00	0.997	J	100	50-150
Silver	1.00	1.03		103	50-150
Thallium	1.00	0.889	J	89	50-150
Vanadium	1.00	ND		99	50-150
Zinc	10.0	9.77	J	98	50-150

Lab Sample ID: CRI 440-590542/11 Concentration Units: ug/L  
CRQL Check Standard Source: MEICPMS CRI2\_00324

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	2.00	2.03		102	50-150
Arsenic	2.00	1.99		100	50-150
Barium	2.00	1.98		99	50-150
Beryllium	1.00	0.890		89	50-150
Cadmium	2.00	1.94		97	50-150
Chromium	2.00	1.95	J	97	50-150
Cobalt	2.00	1.88		94	50-150
Copper	2.00	2.00		100	50-150
Lead	2.00	1.84		92	50-150
Manganese	2.00	1.97		98	50-150
Molybdenum	2.00	1.92	J	96	50-150
Nickel	2.00	2.01		101	50-150
Selenium	2.00	1.99	J	100	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

2B-IN  
CRQL CHECK STANDARD  
METALS

Lab Name: Eurofins Irvine Job No.: 440-258875-1

SDG No.: \_\_\_\_\_

Method: 6020 Instrument ID: ICPMS6

Lab Sample ID: CRI 440-590542/11 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS CRI2\_00324

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Silver	2.00	2.01		101	50-150
Thallium	2.00	1.76		88	50-150
Vanadium	2.00	1.93	J	96	50-150
Zinc	20.0	19.2	J	96	50-150

Lab Sample ID: CRI 440-590542/46 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS CRI2\_00324

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	2.00	2.08		104	50-150
Arsenic	2.00	1.95		97	50-150
Barium	2.00	2.02		101	50-150
Beryllium	1.00	1.06		106	50-150
Cadmium	2.00	1.99		100	50-150
Chromium	2.00	1.99	J	100	50-150
Cobalt	2.00	1.95		98	50-150
Copper	2.00	2.04		102	50-150
Lead	2.00	1.87		94	50-150
Manganese	2.00	2.00		100	50-150
Molybdenum	2.00	1.97	J	99	50-150
Nickel	2.00	2.02		101	50-150
Selenium	2.00	2.15		107	50-150
Silver	2.00	2.06		103	50-150
Thallium	2.00	1.77		89	50-150
Vanadium	2.00	1.97	J	98	50-150
Zinc	20.0	19.0	J	95	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN  
CRQL CHECK STANDARD  
METALS

Lab Name: Eurofins Irvine Job No.: 440-258875-1

SDG No.: \_\_\_\_\_

Method: 7471A Instrument ID: CV-HG4

Lab Sample ID: CRA 440-591352/5-A Concentration Units: mg/Kg

CRQL Check Standard Source: ME 1 PPM HG1\_00418

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.0200	0.0222		111	70-130

Lab Sample ID: CRA 440-591352/5-A Concentration Units: mg/Kg

CRQL Check Standard Source: ME 1 PPM HG1\_00418

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.0200	0.0235		117	70-130

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN  
INSTRUMENT BLANKS  
METALS

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG No.: \_\_\_\_\_

Concentration Units: mg/L

Analyte	RL	ICB 440-590755/10 01/15/2020 12:24		CCB 440-590755/59 01/15/2020 15:16		CCB 440-590755/70 01/15/2020 16:06		CCB 440-590755/82 01/15/2020 16:38	
		Found	C	Found	C	Found	C	Found	C
<b>Aluminum</b>	0.10	ND		ND		ND		ND	
<b>Boron</b>	0.050	ND		ND		ND		ND	
<b>Calcium</b>	0.10	ND		ND		ND		ND	
<b>Iron</b>	0.10	ND		ND		ND		ND	
<b>Lithium</b>	0.50	ND		ND		ND		ND	
<b>Magnesium</b>	0.020	ND		ND		ND		ND	
<b>Phosphorus</b>	0.20	ND		ND		ND		ND	
<b>Potassium</b>	0.50	ND		ND		ND		ND	
<b>Sodium</b>	0.50	ND		ND		ND		ND	
<b>Strontium</b>	0.020	ND		ND		ND		ND	
<b>Tin</b>	0.10	ND		ND		ND		ND	
<b>Titanium</b>	0.0050	ND		ND		ND		ND	

Italicized analytes were not requested for this sequence.

3-IN  
INSTRUMENT BLANKS  
METALS

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG No.: \_\_\_\_\_

Concentration Units: mg/L

Analyte	RL	CCB 440-590755/94 01/15/2020 17:23							
		Found	C	Found	C	Found	C	Found	C
<b>Aluminum</b>	0.10	ND							
<b>Boron</b>	0.050	ND							
<b>Calcium</b>	0.10	ND							
<b>Iron</b>	0.10	ND							
<b>Lithium</b>	0.50	ND							
<b>Magnesium</b>	0.020	ND							
<b>Phosphorus</b>	0.20	ND							
<b>Potassium</b>	0.50	ND							
<b>Sodium</b>	0.50	ND							
<b>Strontium</b>	0.020	ND							
<b>Tin</b>	0.10	ND							
<b>Titanium</b>	0.0050	ND							

Italicized analytes were not requested for this sequence.

3-IN  
INSTRUMENT BLANKS  
METALS

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG No.: \_\_\_\_\_

Concentration Units: ug/L

Analyte	RL	ICB 440-590542/8 01/14/2020 15:02		CCB 440-590542/15 01/14/2020 15:35		CCB 440-590542/24 01/14/2020 16:02		CCB 440-590542/36 01/14/2020 16:40	
		Found	C	Found	C	Found	C	Found	C
<b>Antimony</b>	2.0	ND		ND		ND		ND	
<b>Arsenic</b>	1.0	ND		ND		ND		ND	
<b>Barium</b>	1.0	ND		ND		ND		ND	
<b>Beryllium</b>	0.50	ND		ND		ND		ND	
<b>Cadmium</b>	1.0	ND		ND		ND		ND	
<b>Chromium</b>	2.0	ND		ND		ND		ND	
<b>Cobalt</b>	1.0	ND		ND		ND		ND	
<b>Copper</b>	2.0	ND		ND		ND		ND	
<b>Lead</b>	1.0	ND		ND		ND		ND	
<b>Manganese</b>	1.0	ND		ND		ND		ND	
<b>Molybdenum</b>	2.0	ND		ND		ND		ND	
<b>Nickel</b>	2.0	ND		ND		ND		ND	
<b>Selenium</b>	2.0	ND		ND		ND		ND	
<b>Silver</b>	1.0	ND		ND		ND		ND	
<b>Thallium</b>	1.0	ND		ND		ND		ND	
<b>Vanadium</b>	2.0	ND		ND		ND		ND	
<b>Zinc</b>	20	ND		ND		ND		ND	

Italicized analytes were not requested for this sequence.

3-IN  
INSTRUMENT BLANKS  
METALS

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 440-590542/45 01/14/2020 17:04							
		Found	C	Found	C	Found	C	Found	C
<b>Antimony</b>	2.0	ND							
<b>Arsenic</b>	1.0	ND							
<b>Barium</b>	1.0	ND							
<b>Beryllium</b>	0.50	ND							
<b>Cadmium</b>	1.0	ND							
<b>Chromium</b>	2.0	ND							
<b>Cobalt</b>	1.0	ND							
<b>Copper</b>	2.0	ND							
<b>Lead</b>	1.0	ND							
<b>Manganese</b>	1.0	ND							
<b>Molybdenum</b>	2.0	ND							
<b>Nickel</b>	2.0	ND							
<b>Selenium</b>	2.0	ND							
<b>Silver</b>	1.0	ND							
<b>Thallium</b>	1.0	ND							
<b>Vanadium</b>	2.0	ND							
<b>Zinc</b>	20	ND							

Italicized analytes were not requested for this sequence.

3-IN  
INSTRUMENT BLANKS  
METALS

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG No.: \_\_\_\_\_

Concentration Units: mg/Kg

Analyte	RL	ICB 440-591352/2-A 01/20/2020 12:29		CCB 440-591352/4-A 01/20/2020 12:36		CCB 440-591352/4-A 01/20/2020 13:05		CCB 440-591352/4-A 01/20/2020 13:33	
		Found	C	Found	C	Found	C	Found	C
<b>Mercury</b>	0.020	ND		ND		ND		ND	

Italicized analytes were not requested for this sequence.

3-IN  
INSTRUMENT BLANKS  
METALS

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG No.: \_\_\_\_\_

Concentration Units: mg/Kg

Analyte	RL	CCB 440-591352/4-A 01/20/2020 13:52							
		Found	C	Found	C	Found	C	Found	C
<b>Mercury</b>	0.020	ND							

Italicized analytes were not requested for this sequence.

3-IN  
METHOD BLANK  
METALS

Lab Name: Eurofins Irvine Job No.: 440-258875-1

SDG No.: \_\_\_\_\_

Concentration Units: mg/Kg Lab Sample ID: MB 440-590297/1-A ^5

Instrument Code: ICP8 Batch No.: 590755

CAS No.	Analyte	Concentration	C	Q	Method
7429-90-5	Aluminum	ND			6010B
7440-42-8	Boron	ND			6010B
7440-70-2	Calcium	ND			6010B
7439-89-6	Iron	ND			6010B
7439-93-2	Lithium	ND			6010B
7439-95-4	Magnesium	ND			6010B
7723-14-0	Phosphorus	ND			6010B
7440-09-7	Potassium	ND			6010B
7440-23-5	Sodium	ND			6010B
7440-24-6	Strontium	ND			6010B
7440-31-5	Tin	ND			6010B
7440-32-6	Titanium	ND			6010B

3-IN  
METHOD BLANK  
METALS

Lab Name: Eurofins Irvine Job No.: 440-258875-1

SDG No.: \_\_\_\_\_

Concentration Units: mg/Kg Lab Sample ID: MB 440-590297/1-A ^20

Instrument Code: ICPMS6 Batch No.: 590542

CAS No.	Analyte	Concentration	C	Q	Method
7440-36-0	Antimony	ND			6020
7440-38-2	Arsenic	ND			6020
7440-39-3	Barium	ND			6020
7440-41-7	Beryllium	ND			6020
7440-43-9	Cadmium	ND			6020
7440-47-3	Chromium	ND			6020
7440-48-4	Cobalt	ND			6020
7440-50-8	Copper	ND			6020
7439-92-1	Lead	ND			6020
7439-96-5	Manganese	ND			6020
7439-98-7	Molybdenum	ND			6020
7440-02-0	Nickel	ND			6020
7782-49-2	Selenium	ND			6020
7440-22-4	Silver	ND			6020
7440-28-0	Thallium	ND			6020
7440-62-2	Vanadium	ND			6020
7440-66-6	Zinc	ND			6020

3-IN  
METHOD BLANK  
METALS

Lab Name: Eurofins Irvine Job No.: 440-258875-1

SDG No.: \_\_\_\_\_

Concentration Units: mg/Kg Lab Sample ID: MB 440-590447/1-A

Instrument Code: CV-HG4 Batch No.: 591651

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	ND			7471A

4A-IN  
INTERFERENCE CHECK STANDARD  
METALS

Lab Name: Eurofins Irvine Job No.: 440-258875-1  
SDG No.: \_\_\_\_\_  
Lab Sample ID: ICSA 440-590755/11 Instrument ID: ICP8  
Lab File ID: 200115-3b.csv ICS Source: ME ICP IFA\_02380  
Concentration Units: mg/L

Analyte	True	Found	Percent Recovery
	Solution A	Solution A	
Aluminum	600	615	103
Boron		-0.0024	
Calcium	600	608	101
Iron	600	597	100
Lithium		-0.0105	
Magnesium	600	576	96
Phosphorus		-0.0466	
Potassium		-0.597	
Sodium		-0.624	
Strontium		0.0034	
Tin		-0.0282	
Titanium		-0.0001	
Antimony		-0.0122	
Arsenic		0.0089	
Barium		0.0040	
Beryllium		0.0005	
Cadmium		0.0003	
Chromium		-0.0036	
Cobalt		0.0002	
Copper		-0.0027	
Lead		0.0066	
Manganese		0.0280	
Molybdenum		-0.0013	
Nickel		0.0018	
Selenium		-0.0025	
Silicon		-0.0572	
Silver		-0.0001	
Thallium		-0.0084	
Tungsten		-0.0074	
Vanadium		0.0003	
Zinc		-0.0063	
Zirconium		0.165	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN  
INTERFERENCE CHECK STANDARD  
METALS

Lab Name: Eurofins Irvine Job No.: 440-258875-1  
SDG No.: \_\_\_\_\_  
Lab Sample ID: ICSAB 440-590755/12 Instrument ID: ICP8  
Lab File ID: 200115-3b.csv ICS Source: ME ICP IFB\_02401  
Concentration Units: mg/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Aluminum	601	613	102
Boron	0.500	0.526	105
Calcium	603	607	101
Iron	601	592	99
Lithium	0.500	0.541	108
Magnesium	603	582	97
Phosphorus	0.500	0.475	95
Potassium	5.00	5.10	102
Sodium	5.00	4.85	97
Strontium	0.500	0.517	103
Tin	0.500	0.458	92
Titanium	0.500	0.535	107
Antimony	0.500	0.521	104
Arsenic	0.500	0.507	101
Barium	0.500	0.477	95
Beryllium	0.500	0.528	106
Cadmium	0.500	0.464	93
Chromium	0.500	0.496	99
Cobalt	0.500	0.458	92
Copper	0.500	0.546	109
Lead	0.500	0.468	94
Manganese	0.500	0.522	104
Molybdenum	0.500	0.507	101
Nickel	0.500	0.457	91
Selenium	0.500	0.475	95
Silicon	2.50	2.60	104
Silver	0.250	0.276	110
Thallium	0.500	0.463	93
Tungsten	0.500	0.441	88
Vanadium	0.500	0.518	104
Zinc	0.500	0.441	88
Zirconium	0.500	0.418	84

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN  
INTERFERENCE CHECK STANDARD  
METALS

Lab Name: Eurofins Irvine Job No.: 440-258875-1  
SDG No.: \_\_\_\_\_  
Lab Sample ID: ICSA 440-590755/96 Instrument ID: ICP8  
Lab File ID: 200115-3b.csv ICS Source: ME ICP IFA\_02380  
Concentration Units: mg/L

Analyte	True	Found	Percent Recovery
	Solution A	Solution A	
Aluminum	600	613	102
Boron		-0.0048	
Calcium	600	611	102
Iron	600	591	99
Lithium		-0.0081	
Magnesium	600	578	96
Phosphorus		-0.0256	
Potassium		-0.504	
Sodium		-0.707	
Strontium		0.0030	
Tin		-0.0291	
Titanium		0.0000	
Antimony		-0.0115	
Arsenic		0.0000	
Barium		0.0042	
Beryllium		0.0007	
Cadmium		0.0004	
Chromium		-0.0002	
Cobalt		-0.0004	
Copper		-0.0019	
Lead		0.0047	
Manganese		0.0272	
Molybdenum		0.0010	
Nickel		0.0030	
Selenium		0.0013	
Silicon		-0.0588	
Silver		0.0005	
Thallium		-0.0063	
Tungsten		0.0030	
Vanadium		0.0001	
Zinc		0.0062	
Zirconium		0.167	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN  
INTERFERENCE CHECK STANDARD  
METALS

Lab Name: Eurofins Irvine Job No.: 440-258875-1  
SDG No.: \_\_\_\_\_  
Lab Sample ID: ICSAB 440-590755/97 Instrument ID: ICP8  
Lab File ID: 200115-3b.csv ICS Source: ME ICP IFB\_02401  
Concentration Units: mg/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Aluminum	601	610	102
Boron	0.500	0.529	106
Calcium	603	613	102
Iron	601	591	98
Lithium	0.500	0.538	108
Magnesium	603	588	98
Phosphorus	0.500	0.474	95
Potassium	5.00	4.91	98
Sodium	5.00	4.74	95
Strontium	0.500	0.511	102
Tin	0.500	0.458	92
Titanium	0.500	0.533	107
Antimony	0.500	0.552	110
Arsenic	0.500	0.512	102
Barium	0.500	0.479	96
Beryllium	0.500	0.524	105
Cadmium	0.500	0.461	92
Chromium	0.500	0.493	99
Cobalt	0.500	0.452	90
Copper	0.500	0.547	109
Lead	0.500	0.464	93
Manganese	0.500	0.512	102
Molybdenum	0.500	0.502	100
Nickel	0.500	0.451	90
Selenium	0.500	0.468	94
Silicon	2.50	2.58	103
Silver	0.250	0.275	110
Thallium	0.500	0.443	89
Tungsten	0.500	0.434	87
Vanadium	0.500	0.515	103
Zinc	0.500	0.438	88
Zirconium	0.500	0.431	86

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN  
INTERFERENCE CHECK STANDARD  
METALS

Lab Name: Eurofins Irvine Job No.: 440-258875-1  
SDG No.: \_\_\_\_\_  
Lab Sample ID: ICSA 440-590542/12 Instrument ID: ICPMS6  
Lab File ID: 014ICSA.d ICS Source: MEICPMS ICSA\_00349  
Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
<b>Antimony</b>		<b>0.209</b>	
<b>Arsenic</b>		<b>0.0660</b>	
<b>Barium</b>		<b>0.152</b>	
<b>Beryllium</b>		<b>0.0110</b>	
<b>Cadmium</b>		<b>0.168</b>	
<b>Chromium</b>		<b>0.276</b>	
<b>Cobalt</b>		<b>0.277</b>	
<b>Copper</b>		<b>0.331</b>	
<b>Lead</b>		<b>0.0430</b>	
<b>Manganese</b>		<b>0.416</b>	
<b>Molybdenum</b>	<b>2000</b>	<b>2037</b>	<b>102</b>
<b>Nickel</b>		<b>0.284</b>	
<b>Selenium</b>		<b>0.234</b>	
<b>Silver</b>		<b>0.0210</b>	
<b>Thallium</b>		<b>0.0070</b>	
<b>Vanadium</b>		<b>0.0240</b>	
<b>Zinc</b>		<b>0.341</b>	
<i>Aluminum</i>	<i>100000</i>	<i>95724</i>	<i>96</i>
<i>Cerium</i>		<i>0.0120</i>	
<i>Cesium</i>		<i>0.0180</i>	
<i>Iron</i>	<i>100000</i>	<i>90379</i>	<i>90</i>
<i>Strontium</i>		<i>0.822</i>	
<i>Thorium</i>		<i>0.103</i>	
<i>Tin</i>		<i>0.306</i>	
<i>Total Heavy Metals</i>		<i>0.0000</i>	
<i>Uranium</i>		<i>0.0070</i>	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN  
INTERFERENCE CHECK STANDARD  
METALS

Lab Name: Eurofins Irvine Job No.: 440-258875-1  
SDG No.: \_\_\_\_\_  
Lab Sample ID: ICSAB 440-590542/13 Instrument ID: ICPMS6  
Lab File ID: 015ICSB.d ICS Source: MEICPMS ICSAB\_00276  
Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
<b>Antimony</b>	<b>20.0</b>	<b>19.9</b>	<b>99</b>
<b>Arsenic</b>	<b>20.0</b>	<b>19.2</b>	<b>96</b>
<b>Barium</b>	<b>20.0</b>	<b>19.0</b>	<b>95</b>
<b>Beryllium</b>	<b>20.0</b>	<b>17.5</b>	<b>87</b>
<b>Cadmium</b>	<b>20.0</b>	<b>18.3</b>	<b>92</b>
<b>Chromium</b>	<b>20.0</b>	<b>18.4</b>	<b>92</b>
<b>Cobalt</b>	<b>20.0</b>	<b>18.0</b>	<b>90</b>
<b>Copper</b>	<b>20.0</b>	<b>17.3</b>	<b>86</b>
<b>Lead</b>	<b>20.0</b>	<b>17.0</b>	<b>85</b>
<b>Manganese</b>	<b>20.0</b>	<b>18.8</b>	<b>94</b>
<b>Molybdenum</b>	<b>2020</b>	<b>2080</b>	<b>103</b>
<b>Nickel</b>	<b>20.0</b>	<b>17.6</b>	<b>88</b>
<b>Selenium</b>	<b>20.0</b>	<b>19.4</b>	<b>97</b>
<b>Silver</b>	<b>20.0</b>	<b>17.9</b>	<b>90</b>
<b>Thallium</b>	<b>20.0</b>	<b>16.3</b>	<b>81</b>
<b>Vanadium</b>	<b>20.0</b>	<b>18.6</b>	<b>93</b>
<b>Zinc</b>	<b>20.0</b>	<b>17.8</b>	<b>89</b>
<i>Aluminum</i>	<i>100000</i>	<i>96301</i>	<i>96</i>
<i>Cerium</i>	<i>20.0</i>	<i>17.4</i>	<i>87</i>
<i>Cesium</i>	<i>20.0</i>	<i>19.1</i>	<i>96</i>
<i>Iron</i>	<i>100000</i>	<i>89464</i>	<i>89</i>
<i>Rubidium</i>	<i>20.0</i>	<i>21.8</i>	<i>109</i>
<i>Strontium</i>	<i>20.0</i>	<i>21.1</i>	<i>105</i>
<i>Tin</i>	<i>20.0</i>	<i>19.2</i>	<i>96</i>
<i>Total Heavy Metals</i>	<i>120</i>	<i>106</i>	<i>89</i>
<i>Uranium</i>	<i>20.0</i>	<i>17.1</i>	<i>85</i>

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN  
INTERFERENCE CHECK STANDARD  
METALS

Lab Name: Eurofins Irvine Job No.: 440-258875-1  
SDG No.: \_\_\_\_\_  
Lab Sample ID: ICSA 440-590542/47 Instrument ID: ICPMS6  
Lab File ID: 055ICSA.d ICS Source: MEICPMS ICSA\_00349  
Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
<b>Antimony</b>		<b>0.198</b>	
<b>Arsenic</b>		<b>0.0720</b>	
<b>Barium</b>		<b>0.185</b>	
<b>Beryllium</b>		<b>0.0000</b>	
<b>Cadmium</b>		<b>0.164</b>	
<b>Chromium</b>		<b>0.278</b>	
<b>Cobalt</b>		<b>0.288</b>	
<b>Copper</b>		<b>0.321</b>	
<b>Lead</b>		<b>0.0420</b>	
<b>Manganese</b>		<b>0.434</b>	
<b>Molybdenum</b>	<b>2000</b>	<b>2068</b>	<b>103</b>
<b>Nickel</b>		<b>0.295</b>	
<b>Selenium</b>		<b>0.335</b>	
<b>Silver</b>		<b>0.0240</b>	
<b>Thallium</b>		<b>0.0120</b>	
<b>Vanadium</b>		<b>0.0270</b>	
<b>Zinc</b>		<b>0.326</b>	
<i>Aluminum</i>	<i>100000</i>	<i>95274</i>	<i>95</i>
<i>Cerium</i>		<i>0.0190</i>	
<i>Cesium</i>		<i>0.0250</i>	
<i>Iron</i>	<i>100000</i>	<i>90892</i>	<i>91</i>
<i>Strontium</i>		<i>0.840</i>	
<i>Thorium</i>		<i>0.0640</i>	
<i>Tin</i>		<i>0.344</i>	
<i>Total Heavy Metals</i>		<i>0.0000</i>	
<i>Uranium</i>		<i>0.0130</i>	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN  
INTERFERENCE CHECK STANDARD  
METALS

Lab Name: Eurofins Irvine Job No.: 440-258875-1  
SDG No.: \_\_\_\_\_  
Lab Sample ID: ICSAB 440-590542/48 Instrument ID: ICPMS6  
Lab File ID: 056ICSB.d ICS Source: MEICPMS ICSAB\_00276  
Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
<b>Antimony</b>	<b>20.0</b>	<b>20.1</b>	<b>101</b>
<b>Arsenic</b>	<b>20.0</b>	<b>19.2</b>	<b>96</b>
<b>Barium</b>	<b>20.0</b>	<b>19.3</b>	<b>97</b>
<b>Beryllium</b>	<b>20.0</b>	<b>17.3</b>	<b>87</b>
<b>Cadmium</b>	<b>20.0</b>	<b>18.4</b>	<b>92</b>
<b>Chromium</b>	<b>20.0</b>	<b>18.6</b>	<b>93</b>
<b>Cobalt</b>	<b>20.0</b>	<b>18.1</b>	<b>91</b>
<b>Copper</b>	<b>20.0</b>	<b>17.4</b>	<b>87</b>
<b>Lead</b>	<b>20.0</b>	<b>17.3</b>	<b>86</b>
<b>Manganese</b>	<b>20.0</b>	<b>18.8</b>	<b>94</b>
<b>Molybdenum</b>	<b>2020</b>	<b>2105</b>	<b>104</b>
<b>Nickel</b>	<b>20.0</b>	<b>17.5</b>	<b>88</b>
<b>Selenium</b>	<b>20.0</b>	<b>19.5</b>	<b>97</b>
<b>Silver</b>	<b>20.0</b>	<b>18.3</b>	<b>91</b>
<b>Thallium</b>	<b>20.0</b>	<b>16.6</b>	<b>83</b>
<b>Vanadium</b>	<b>20.0</b>	<b>19.0</b>	<b>95</b>
<b>Zinc</b>	<b>20.0</b>	<b>18.1</b>	<b>91</b>
<i>Aluminum</i>	<i>100000</i>	<i>96526</i>	<i>97</i>
<i>Cerium</i>	<i>20.0</i>	<i>17.7</i>	<i>89</i>
<i>Cesium</i>	<i>20.0</i>	<i>19.2</i>	<i>96</i>
<i>Iron</i>	<i>100000</i>	<i>90157</i>	<i>90</i>
<i>Rubidium</i>	<i>20.0</i>	<i>22.0</i>	<i>110</i>
<i>Strontium</i>	<i>20.0</i>	<i>21.4</i>	<i>107</i>
<i>Tin</i>	<i>20.0</i>	<i>19.5</i>	<i>97</i>
<i>Total Heavy Metals</i>	<i>120</i>	<i>107</i>	<i>89</i>
<i>Uranium</i>	<i>20.0</i>	<i>17.3</i>	<i>87</i>

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

5A-IN  
MATRIX SPIKE SAMPLE RECOVERY  
METALS

Client ID: WRSB208\_0-0.5 MS

Lab ID: 440-258875-1 MS

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG No.: \_\_\_\_\_

Matrix: Solid

Concentration Units: mg/Kg

% Solids: 95.3

Analyte	SSR C	Sample Result (SR) C	Spike Added (SA)	%R	Control Limit %R	Q	Method	
Aluminum	9430	7500	53.3	3645	75-125	4	6010B	
Boron	48.3	4.4	J	53.3	83	75-125	6010B	
Calcium	8260	7000	266	467	75-125	4	6010B	
Iron	12800	14000	53.3	-2300	75-125	4	6010B	
Lithium	54.0	7.5	53.3	87	75-125		6010B	
Magnesium	3440	3300	266	58	75-125	4	6010B	
Phosphorus	475	440	53.3	57	75-125	4	6010B	
Potassium	1760	1200	533	114	75-125		6010B	
Sodium	966	320	533	121	75-125		6010B	
Strontium	144	69	53.3	141	75-125	F1	6010B	
Tin	46.5	ND	53.3	87	75-125		6010B	
Titanium	441	340	53.3	191	75-125	4	6010B	
Antimony	33.7	0.54	J	53.3	62	75-125	F1	6020
Arsenic	50.0	5.4		53.3	84	75-125		6020
Barium	176	86		53.3	169	75-125	F1	6020
Beryllium	44.9	0.47		53.3	83	75-125		6020
Cadmium	45.6	ND		53.3	86	75-125		6020
Chromium	50.6	6.4		53.3	83	75-125		6020
Cobalt	48.4	5.0		53.3	81	75-125		6020
Copper	105	67		53.3	72	75-125	F1	6020
Lead	49.1	5.0		53.3	83	75-125		6020
Manganese	294	220		53.3	146	75-125	4	6020
Molybdenum	45.2	0.63	J	53.3	84	75-125		6020
Nickel	48.9	5.4		53.3	82	75-125		6020
Selenium	45.0	1.1		53.3	83	75-125		6020
Silver	23.9	ND		26.6	90	75-125		6020
Thallium	45.0	ND		53.3	84	75-125		6020
Vanadium	73.6	32		53.3	79	75-125		6020
Zinc	66.7	22		53.3	83	75-125		6020
Mercury	0.399	0.062		0.420	80	75-125		7471A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.  
Note - Results and Reporting Limits have been adjusted for dry weight.

FORM VA - IN

5A-IN  
 MATRIX SPIKE DUPLICATE SAMPLE RECOVERY  
 METALS

Client ID: WRSB208\_0-0.5 MSD

Lab ID: 440-258875-1 MSD

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG No.: \_\_\_\_\_

Matrix: Solid

Concentration Units: mg/Kg

% Solids: 95.3

Analyte	(SDR) C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Aluminum	9560	52.7	3928	75-125	1	20	4	6010B
Boron	49.5	52.7	86	75-125	3	20		6010B
Calcium	7600	264	221	75-125	8	20	4	6010B
Iron	14000	52.7	50	75-125	9	20	4	6010B
Lithium	55.4	52.7	91	75-125	3	20		6010B
Magnesium	3940	264	251	75-125	14	20	4	6010B
Phosphorus	524	52.7	151	75-125	10	20	4	6010B
Potassium	1760	527	115	75-125	0	20		6010B
Sodium	825	527	95	75-125	16	20		6010B
Strontium	109	52.7	76	75-125	28	20	F2	6010B
Tin	46.1	52.7	88	75-125	1	20		6010B
Titanium	501	52.7	307	75-125	13	20	4	6010B
Antimony	34.0	52.7	63	75-125	1	20	F1	6020
Arsenic	50.3	52.7	85	75-125	1	20		6020
Barium	121	52.7	66	75-125	37	20	F1 F2	6020
Beryllium	44.4	52.7	83	75-125	1	20		6020
Cadmium	46.3	52.7	88	75-125	2	20		6020
Chromium	51.4	52.7	85	75-125	2	20		6020
Cobalt	48.3	52.7	82	75-125	0	20		6020
Copper	109	52.7	81	75-125	4	20		6020
Lead	49.1	52.7	84	75-125	0	20		6020
Manganese	258	52.7	78	75-125	13	20	4	6020
Molybdenum	45.2	52.7	85	75-125	0	20		6020
Nickel	49.3	52.7	83	75-125	1	20		6020
Selenium	45.8	52.7	85	75-125	2	20		6020
Silver	24.2	26.4	92	75-125	1	20		6020
Thallium	45.0	52.7	85	75-125	0	20		6020
Vanadium	75.9	52.7	84	75-125	3	20		6020
Zinc	68.3	52.7	87	75-125	2	20		6020
Mercury	0.409	0.420	83	75-125	3	20		7471A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.  
 Note - Results and Reporting Limits have been adjusted for dry weight.

FORM VD - IN

5B-IN  
 POST DIGESTION SPIKE SAMPLE RECOVERY  
 METALS

Client ID: WRSB208\_0-0.5 PDS

Lab ID: 440-258875-1 PDS

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG No.: \_\_\_\_\_

Matrix: Solid

Concentration Units: mg/Kg

Analyte	SSR C	Sample Result (SR) C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Aluminum	7630	7500	52.7	NC	80-120		6010B
Boron	56.1	4.4 J	52.7	98	80-120		6010B
Calcium	7320	7000	264	NC	80-120		6010B
Iron	14100	14000	52.7	NC	80-120		6010B
Lithium	59.8	7.5	52.7	99	80-120		6010B
Magnesium	3540	3300	264	NC	80-120		6010B
Phosphorus	501	440	52.7	106	80-120		6010B
Potassium	1690	1200	527	102	80-120		6010B
Sodium	846	320	527	99	80-120		6010B
Strontium	121	69	52.7	99	80-120		6010B
Tin	52.0	ND	52.7	99	80-120		6010B
Titanium	396	340	52.7	109	80-120		6010B
Antimony	53.2	0.54 J	52.7	100	75-125		6020
Arsenic	55.2	5.4	52.7	94	75-125		6020
Barium	138	86	52.7	99	75-125		6020
Beryllium	49.6	0.47	52.7	93	75-125		6020
Cadmium	50.9	ND	52.7	96	75-125		6020
Chromium	55.4	6.4	52.7	93	75-125		6020
Cobalt	54.0	5.0	52.7	93	75-125		6020
Copper	115	67	52.7	91	75-125		6020
Lead	55.3	5.0	52.7	95	75-125		6020
Manganese	270	220	52.7	101	75-125		6020
Molybdenum	52.7	0.63 J	52.7	99	75-125		6020
Nickel	54.1	5.4	52.7	92	75-125		6020
Selenium	50.2	1.1	52.7	93	75-125		6020
Silver	52.1	ND	52.7	99	75-125		6020
Thallium	50.3	ND	52.7	95	75-125		6020
Vanadium	80.6	32	52.7	93	75-125		6020
Zinc	70.3	22	52.7	91	75-125		6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.  
 Note - Results and Reporting Limits have been adjusted for dry weight.

FORM VB - IN

7A-IN  
LAB CONTROL SAMPLE  
METALS

Lab ID: LCS 440-590297/2-A ^5

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

Sample Matrix: Solid

LCS Source: ICP STD A\_00003

Analyte	Solid(mg/Kg)						
	True	Found	C	%R	Limits	Q	Method
Aluminum	50.3	46.3		92	80	120	
Boron	50.3	45.1		90	80	120	
Calcium	251	238		95	80	120	
Iron	50.3	52.2		104	80	120	
Lithium	50.3	46.6		93	80	120	
Magnesium	251	235		94	80	120	
Phosphorus	50.3	46.1		92	80	120	
Potassium	503	460		92	80	120	
Sodium	503	461		92	80	120	
Strontium	50.3	46.6		93	80	120	
Tin	50.3	47.5		95	80	120	
Titanium	50.3	47.4		94	80	120	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN  
LAB CONTROL SAMPLE  
METALS

Lab ID: LCS 440-590297/2-A ^20

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

Sample Matrix: Solid

LCS Source: ICP STD B\_00003

Analyte	Solid(mg/Kg)						
	True	Found	C	%R	Limits	Q	Method
Antimony	50.3	46.9		93	80 120		6020
Arsenic	50.3	45.9		91	80 120		6020
Barium	50.3	46.8		93	80 120		6020
Beryllium	50.3	45.6		91	80 120		6020
Cadmium	50.3	45.6		91	80 120		6020
Chromium	50.3	45.7		91	80 120		6020
Cobalt	50.3	45.8		91	80 120		6020
Copper	50.3	46.3		92	80 120		6020
Lead	50.3	45.6		91	80 120		6020
Manganese	50.3	45.3		90	80 120		6020
Molybdenum	50.3	45.4		90	80 120		6020
Nickel	50.3	46.0		92	80 120		6020
Selenium	50.3	45.7		91	80 120		6020
Silver	25.1	24.1		96	80 120		6020
Thallium	50.3	45.6		91	80 120		6020
Vanadium	50.3	45.3		90	80 120		6020
Zinc	50.3	45.2		90	80 120		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN  
LAB CONTROL SAMPLE  
METALS

Lab ID: LCS 440-590447/2-A

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

Sample Matrix: Solid

LCS Source: ME 1 PPM HG1\_00416

Analyte	Solid (mg/Kg)						
	True	Found	C	%R	Limits	Q	Method
Mercury	0.400	0.373		93	80	120	7471A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

8-IN  
ICP-AES AND ICP-MS SERIAL DILUTIONS  
METALS

Lab ID: 440-258875-1

SDG No: \_\_\_\_\_

Lab Name: Eurofins Irvine Job No: 440-258875-1

Matrix: Solid Concentration Units: mg/Kg

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Aluminum	7500		7280		2.9		6010B
Boron	4.4	J	ND		NC		6010B
Calcium	7000		6930		1.2		6010B
Iron	14000		14000		0.09		6010B
Lithium	7.5		ND		NC		6010B
Magnesium	3300		3320		1.2		6010B
Phosphorus	440		440		0.98		6010B
Potassium	1200		1110		NC		6010B
Sodium	320		271	J	NC		6010B
Strontium	69		68.3		NC		6010B
Tin	ND		ND		NC		6010B
Titanium	340		330		2.4		6010B

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

8-IN  
ICP-AES AND ICP-MS SERIAL DILUTIONS  
METALS

Lab ID: 440-258875-1

SDG No: \_\_\_\_\_

Lab Name: Eurofins Irvine Job No: 440-258875-1

Matrix: Solid Concentration Units: mg/Kg

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Antimony	0.54	J	ND		NC		6020
Arsenic	5.4		5.37		NC		6020
Barium	86		85.5		0.76		6020
Beryllium	0.47		ND		NC		6020
Cadmium	ND		ND		NC		6020
Chromium	6.4		6.63		NC		6020
Cobalt	5.0		5.05		NC		6020
Copper	67		68.3		2.1		6020
Lead	5.0		4.97		NC		6020
Manganese	220		219		0.99		6020
Molybdenum	0.63	J	ND		NC		6020
Nickel	5.4		5.59		NC		6020
Selenium	1.1		ND		NC		6020
Silver	ND		ND		NC		6020
Thallium	ND		ND		NC		6020
Vanadium	32		32.0		0.73		6020
Zinc	22		ND		NC		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

9-IN  
DETECTION LIMITS  
METALS

Lab Name: Eurofins Irvine

Job Number: 440-258875-1

SDG Number: \_\_\_\_\_

Matrix: Solid

Instrument ID: ICP8

Method: 6010B

MDL Date: 08/11/2017 12:45

Prep Method: 3050B

Analyte	Wavelength/ Mass	RL (mg/Kg)	MDL (mg/Kg)
Aluminum	308.215	10	7.7
Boron	249.773	5	2.5
Calcium	315.887	25	13.5
Iron	238.204	10	6.9
Lithium	610.362	5	2.8
Magnesium	279.079	10	5
Phosphorus	214.914	5	2.5
Potassium		62.5	32.5
Sodium	589.592	62.5	32
Strontium	421.552	5	2.5
Tin	189.933	10	5
Titanium	334.941	2	1

9-IN  
CALIBRATION BLANK DETECTION LIMITS  
METALS

Lab Name: Eurofins Irvine

Job Number: 440-258875-1

SDG Number:

Matrix: Solid

Instrument ID: ICP8

Method: 6010B

XMDL Date: 06/15/2017 17:46

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Aluminum	308.215	0.1	0.05
Boron	249.773	0.05	0.025
Calcium	315.887	0.1	0.05
Iron	238.204	0.1	0.05
Lithium	610.362	0.5	0.025
Magnesium	279.079	0.02	0.01
Phosphorus	214.914	0.2	0.1
Potassium	766.49	0.5	0.25
Sodium	589.592	0.5	0.26
Strontium	421.552	0.02	0.01
Tin	189.933	0.1	0.05
Titanium	334.941	0.005	0.0025

9-IN  
DETECTION LIMITS  
METALS

Lab Name: Eurofins Irvine

Job Number: 440-258875-1

SDG Number:

Matrix: Solid

Instrument ID: ICPMS6

Method: 6020

MDL Date: 08/07/2015 16:43

Prep Method: 3050B

Analyte	Wavelength/ Mass	RL (mg/Kg)	MDL (mg/Kg)
Antimony	121	1	0.27
Arsenic	75	0.5	0.25
Barium	135	0.5	0.25
Beryllium	9	0.3	0.15
Cadmium	114	0.5	0.25
Chromium	52	1	0.5
Cobalt	59	0.5	0.21
Copper		1	0.5
Lead	208	0.5	0.25
Manganese	55	0.5	0.25
Molybdenum	98	1	0.5
Nickel	60	1	0.5
Selenium		1	0.2
Silver	107	0.5	0.1
Thallium	205	0.5	0.25
Vanadium	51	1	0.5
Zinc	66	10	5

9-IN  
CALIBRATION BLANK DETECTION LIMITS  
METALS

Lab Name: Eurofins Irvine

Job Number: 440-258875-1

SDG Number: \_\_\_\_\_

Matrix: Solid

Instrument ID: ICPMS6

Method: 6020

XMDL Date: 05/13/2019 10:08

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Antimony	121	2	0.5
Arsenic	75	1	0.5
Barium	135	1	0.5
Beryllium	9	0.5	0.25
Cadmium	114	1	0.25
Chromium	52	2	0.5
Cobalt	59	1	0.5
Copper		2	0.5
Lead	208	1	0.5
Manganese	55	1	0.5
Molybdenum	98	2	0.5
Nickel	60	2	0.5
Selenium		2	0.5
Silver	107	1	0.5
Thallium	205	1	0.2
Vanadium	51	2	1
Zinc	66	20	2.5

9-IN  
DETECTION LIMITS  
METALS

Lab Name: Eurofins Irvine

Job Number: 440-258875-1

SDG Number:

Matrix: Solid

Instrument ID: CV-HG4

Method: 7471A

MDL Date: 07/05/2011 10:19

Prep Method: 7471A

Analyte	Wavelength/ Mass	RL (mg/Kg)	MDL (mg/Kg)
Mercury		0.02	0.012

9-IN  
CALIBRATION BLANK DETECTION LIMITS  
METALS

Lab Name: Eurofins Irvine

Job Number: 440-258875-1

SDG Number: \_\_\_\_\_

Matrix: Solid

Instrument ID: CV-HG4

Method: 7471A

XMDL Date: 01/01/2016 16:44

Analyte	Wavelength/ Mass	XRL (mg/Kg)	XMDL (mg/Kg)
Mercury		0.02	0.012

10-IN  
ICP-AES INTERELEMENT CORRECTION FACTORS  
METALS

Lab Name: Eurofins Irvine

Job Number: 440-258875-1

SDG No.: \_\_\_\_\_

ICP-AES Instrument ID: ICP8 Date: 01/15/2020

Analyte	Wave Length	Al	Ca	Co	Cr	Cu	Fe	Mg	Mn	Mo	Ni	Sn	Ti	V	W
Aluminum	396.152		0.000013	-0.000018	0.000025	0.000008	-0.000036	0.000046	0	0.02689	-0.000079	-0.000019	-0.000203	0.000009	0.001073
Antimony	206.834	0.000009	0.000003	0.000006	0.010395	-0.000001	0.000022	0.00005	-0.000075	-0.01878	-0.000037	0.000237	0.000208	0.00005	-0.000369
Arsenic	188.980	0.000011	-0.000005	-0.000018	-0.012816	0.00004	-0.00009	0.000008	-0.000015	0.000025	0.000095	-0.000094	-0.000062	-0.000062	0.000903
Barium	233.527	0	0	-0.000006	-0.000002	0.000001	0.000078	0.000001	0	-0.000191	-0.000007	-0.000001	0.000003	-0.000164	0.000137
Beryllium	234.861	0	0	0.000004	0	0	0.000098	0	-0.000003	-0.000013	-0.000018	0.000001	0.000003	0.000001	0.000004
Boron	249.678	0	0.000001	0.00088	0.000452	-0.00002	-0.00011	0	-0.00007	-0.000017	-0.000005	-0.000014	-0.00003	-0.000018	-0.010398
Cadmium	214.439	-0.000001	0	0.000002	-0.000009	-0.000003	0.00006	0	0.000001	-0.000006	0.000004	0.000001	0.000005	0.000002	-0.000056
Calcium	422.673	-0.000006		0.000876	0.000377	-0.000272	-0.000064	0.000039	-0.000053	-0.000524	-0.000396	-0.000114	-0.000132	0.000387	-0.000193
Chromium	205.560	0.000001	0.000003	-0.000007		0.000042	0.000004	0	0.000025	-0.000681	-0.000317	0.000014	0.000028	-0.000018	0.000386
Cobalt	228.615	0	0.000001		0.000085	0.000016	0.000008	0.000002	-0.000003	0.000019	0.000157	0.000002	0.001777	-0.000007	0.000113
Copper	324.754	0.000001	-0.000019	0.000014	0.000019		0.00001	0.000002	0.000013	0.000217	0.000018	0.000014	0.000206	-0.000092	0.00002
Iron	238.204	-0.000007	0.000002	-0.000338	-0.000187	-0.00013		0.000024	0.000002	-0.000162	-0.000109	-0.000119	-0.000132	-0.000188	-0.000132
Lead	220.353	-0.000039	0.000003	-0.000498	0	-0.00009	-0.000204	-0.0005	0.00009	-0.000819	-0.000019	0.000021	-0.000428	-0.000038	-0.000096
Lithium	670.783	0.000054	0.000021	-0.000148	-0.00023	-0.001097	-0.0001	0.000057	-0.000518	-0.000367	-0.000358	-0.001101	0.000381	-0.001377	-0.000136
Magnesium	279.078	-0.000001	0.000007	-0.000382	-0.000435	-0.0001	-0.000217		0.000627	-0.000188	-0.000014	-0.000068	-0.000188	0.000112	-0.000038
Manganese	259.372	0	0.000001	0.00001	-0.000007	-0.000001	0.0012	0.001474		0.004715	0.000013	0.000005	0.000019	0.000001	0.000005
Molybdenum	204.598	0.000025	0	0.000039	0.000067	0.000001	0.000004	0	0.000022		0.000085	-0.000008	0.000005	-0.000031	0.000033
Nickel	231.604	0.000001	-0.000003	-0.000756	0.000004	-0.000028	-0.000011	-0.000002	-0.000049	-0.000042		0.000006	0.000011	-0.000001	-0.000013
Phosphorus	213.618	0.000001	-0.000013	0.000141	0.000127	-0.03762	0.00005	0.000004	-0.000139	-0.020778	0.000094	-0.000098	0.000151	0.00024	-0.000573
Potassium	744.491	0.000095	0.000087	0.002408	0.001429	-0.000339	0.000196	0.000277	-0.000372	-0.001987	0.001312	0.001861	0.001852	0.001103	0.001579
Selenium	196.026	-0.000006	-0.000007	-0.00066	-0.000051	-0.000370	-0.00037	-0.00032	0.000565	-0.000003	-0.000241	0	-0.000066	-0.000483	0.009364
Silicon	251.611	0.000013	0.00002	0.000136	0.000095	0.000162	-0.000038	0.000048	0.000255	0.010982	0.000192	0.000679	0.004127	0.000213	0.053502
Silver	328.068	0	-0.000003	-0.000013	-0.000026	-0.000003	-0.000041	-0.000002	0.000075	0.000029	0.000003	-0.000009	-0.000107	0.000009	0.000009
Sodium	589.592	0.000003	0.000041	0.000558	0.000239	0.000428	0	0.000018	0.000127	0.002128	0.000479	0.000076	0.000228	-0.000004	0.006467
Strontium	421.552	0	0.000003	0.000002	0.000003	-0.000001	0.000001	0	0	0.000001	0.000002	0.000002	0.000001	0	0.000017
Thallium	190.794	-0.000001	-0.000005	0.003078	0.000156	-0.000039	0.000078	0	0.001388	0.000096	-0.000005	-0.000043	-0.010982	-0.02142	0.000265
Tin	189.925	0.000001	0	0.000083	0.000021	0.000021	0	0.000003	0.000047	0.000038	0.000039		-0.000119	0.000028	0.000028
Titanium	336.122	0	-0.000008	-0.000017	-0.000029	0.000002	0	0	0.000005	-0.00012	-0.000039	0.000005		-0.000364	0.000399
Tungsten	207.912	-0.000006	-0.000009	-0.000082	-0.000001	-0.000042	-0.000005	-0.000001	-0.000021	0.000144	-0.000024	-0.000005	-0.000009	-0.000019	
Vanadium	292.401	0.000004	0.000038	0.000001	0.000214	0.000012	-0.000004	0.000002	0.000014	-0.008504	0.000003	0.000009	0.000907		0.000183

X-IN

10-IN  
ICP-AES INTERELEMENT CORRECTION FACTORS  
METALS

Lab Name: Eurofins Irvine

Job Number: 440-258875-1

SDG No.: \_\_\_\_\_

ICP-AES Instrument ID: ICP8 Date: 01/15/2020

Analyte	Wave Length	Al	Ca	Co	Cr	Cu	Fe	Mg	Mn	Mo	Ni	Sn	Ti	V	W
Yttrium	371.029	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Zinc	202.548	0.000003	0.000003	0.000013	-0.001604	0.0078	0	-0.00003	0.000044	0.00007	-0.000062	0.000012	0.000048	0.000036	0.000339
Zirconium	343.823	0	0.000002	-0.000097	0.000005	0.000002	-0.00025	-0.0003	-0.000025	-0.000012	-0.000009	0.000007	-0.000025	0.000005	0.000085

X-IN

10-IN  
ICP-AES INTERELEMENT CORRECTION FACTORS  
METALS

Lab Name: Eurofins Irvine

Job Number: 440-258875-1

SDG No.: \_\_\_\_\_

ICP-AES Instrument ID: ICP8 Date: 01/15/2020

Analyte	Wave Length	Zn	Zr												
Aluminum	396.152	-0.00005	0.008541												
Antimony	206.834	0.000096	-0.000086												
Arsenic	188.980	-0.000075	0.000125												
Barium	233.527	0.000001	-0.000001												
Beryllium	234.861	0.000001	0.000006												
Boron	249.678	0.00002	0.000445												
Cadmium	214.439	0.000005	0.000001												
Calcium	422.673	-0.000066	-0.000488												
Chromium	205.560	0.000037	0.000101												
Cobalt	228.615	-0.000013	-0.000003												
Copper	324.754	0.000016	0.00004												
Iron	238.204	0.00011	0.000622												
Lead	220.353	-0.000028	-0.000005												
Lithium	670.783	-0.00073	-0.000634												
Magnesium	279.078	-0.000119	-0.000067												
Manganese	259.372	0.000005	0.000048												
Molybdenum	204.598	0.000052	0.000002												
Nickel	231.604	0.000023	0.000028												
Phosphorus	213.618	-0.00009	0.000028												
Potassium	744.491	-0.001412	0.000491												
Selenium	196.026	-0.000101	-0.000166												
Silicon	251.611	0.001039	0.006759												
Silver	328.068	0.000001	0.003947												
Sodium	589.592	-0.000112	0.000318												
Strontium	421.552	0	-0.00002												
Thallium	190.794	-0.000027	0.000028												
Tin	189.925	0.000048	0.000557												
Titanium	336.122	0.000006	0.000122												
Tungsten	207.912	0.008281	0.000004												
Vanadium	292.401	0.000024	-0.000008												

X-IN

10-IN  
ICP-AES INTERELEMENT CORRECTION FACTORS  
METALS

Lab Name: Eurofins Irvine

Job Number: 440-258875-1

SDG No.: \_\_\_\_\_

ICP-AES Instrument ID: ICP8 Date: 01/15/2020

Analyte	Wave Length	Zn	Zr													
Yttrium	371.029	0	0													
Zinc	202.548		0.000117													
Zirconium	343.823	0.000003														

X-IN

11-IN  
LINEAR RANGES  
METALS

Lab Name: Eurofins Irvine

Job No: 440-258875-1

SDG No.:

Instrument ID: ICP8 Date: 06/15/2017 18:16

Analyte	Integ. Time (Sec.)	Concentration (mg/L)	Method
Aluminum		600	6010B
Boron		30	6010B
Calcium		600	6010B
Iron		600	6010B
Lithium		30	6010B
Magnesium		600	6010B
Phosphorus		30	6010B
Potassium		1000	6010B
Sodium		1000	6010B
Strontium		30	6010B
Tin		30	6010B
Titanium		30	6010B

11-IN  
LINEAR RANGES  
METALS

Lab Name: Eurofins Irvine

Job No: 440-258875-1

SDG No.:

Instrument ID: ICPMS6 Date: 07/03/2018 18:32

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Antimony		5000	6020
Arsenic		5000	6020
Barium		5000	6020
Beryllium		1000	6020
Cadmium		5000	6020
Chromium		5000	6020
Cobalt		5000	6020
Copper		5000	6020
Lead		5000	6020
Manganese		4000	6020
Molybdenum		2000	6020
Nickel		5000	6020
Selenium		5000	6020
Silver		100	6020
Thallium		5000	6020
Vanadium		5000	6020
Zinc		5000	6020

11-IN  
LINEAR RANGES  
METALS

Lab Name: Eurofins Irvine

Job No: 440-258875-1

SDG No.: \_\_\_\_\_

Instrument ID: CV-HG4

Date: 01/01/2019 13:06

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Mercury		10	7471A

12-IN  
PREPARATION LOG  
METALS

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG No.: \_\_\_\_\_

Prep Method: 3050B

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight (g)	Initial Volume	Final Volume (mL)
MB 440-590297/1-A ^5	01/13/2020 16:29	590297	2.00		50
LCS 440-590297/2-A ^5	01/13/2020 16:29	590297	1.99		50
440-258875-1	01/13/2020 16:29	590297	1.99		50
440-258875-1 MS	01/13/2020 16:29	590297	1.97		50
440-258875-1 MSD	01/13/2020 16:29	590297	1.99		50
440-258875-2	01/13/2020 16:29	590297	1.98		50
440-258875-3	01/13/2020 16:29	590297	1.99		50
440-258875-4	01/13/2020 16:29	590297	1.99		50
440-258875-5	01/13/2020 16:29	590297	2.01		50
440-258875-6	01/13/2020 16:29	590297	2.04		50
440-258875-7	01/13/2020 16:29	590297	1.97		50
440-258875-8	01/13/2020 16:29	590297	1.96		50
440-258875-9	01/13/2020 16:29	590297	1.97		50
440-258875-11	01/13/2020 16:29	590297	1.96		50
440-258875-12	01/13/2020 16:29	590297	1.98		50
440-258875-13	01/13/2020 16:29	590297	2.00		50
440-258875-14	01/13/2020 16:29	590297	1.96		50
440-258875-15	01/13/2020 16:29	590297	1.99		50
440-258875-16	01/13/2020 16:29	590297	1.99		50
440-258875-17	01/13/2020 16:29	590297	1.98		50
440-258875-19	01/13/2020 16:29	590297	1.96		50
440-258875-20	01/13/2020 16:29	590297	2.02		50

12-IN  
PREPARATION LOG  
METALS

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG No.: \_\_\_\_\_

Prep Method: 3050B

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight (g)	Initial Volume	Final Volume (mL)
MB 440-590297/1-A ^20	01/13/2020 16:29	590297	2.00		50
LCS 440-590297/2-A ^20	01/13/2020 16:29	590297	1.99		50
440-258875-1	01/13/2020 16:29	590297	1.99		50
440-258875-1 MS	01/13/2020 16:29	590297	1.97		50
440-258875-1 MSD	01/13/2020 16:29	590297	1.99		50
440-258875-2	01/13/2020 16:29	590297	1.98		50
440-258875-3	01/13/2020 16:29	590297	1.99		50
440-258875-4	01/13/2020 16:29	590297	1.99		50
440-258875-5	01/13/2020 16:29	590297	2.01		50
440-258875-6	01/13/2020 16:29	590297	2.04		50
440-258875-7	01/13/2020 16:29	590297	1.97		50
440-258875-8	01/13/2020 16:29	590297	1.96		50
440-258875-9	01/13/2020 16:29	590297	1.97		50
440-258875-11	01/13/2020 16:29	590297	1.96		50
440-258875-12	01/13/2020 16:29	590297	1.98		50
440-258875-13	01/13/2020 16:29	590297	2.00		50
440-258875-14	01/13/2020 16:29	590297	1.96		50
440-258875-15	01/13/2020 16:29	590297	1.99		50
440-258875-16	01/13/2020 16:29	590297	1.99		50
440-258875-17	01/13/2020 16:29	590297	1.98		50
440-258875-19	01/13/2020 16:29	590297	1.96		50
440-258875-20	01/13/2020 16:29	590297	2.02		50

12-IN  
PREPARATION LOG  
METALS

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG No.: \_\_\_\_\_

Prep Method: 7471A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight (g)	Initial Volume	Final Volume (mL)
MB 440-590447/1-A	01/17/2020 08:41	590447	0.50		50
LCS 440-590447/2-A	01/17/2020 08:41	590447	0.50		50
440-258875-1	01/17/2020 08:41	590447	0.51		50
440-258875-1 MS	01/17/2020 08:41	590447	0.50		50
440-258875-1 MSD	01/17/2020 08:41	590447	0.50		50
440-258875-2	01/17/2020 08:41	590447	0.50		50
440-258875-3	01/17/2020 08:41	590447	0.49		50
440-258875-4	01/17/2020 08:41	590447	0.49		50
440-258875-5	01/17/2020 08:41	590447	0.51		50
440-258875-6	01/17/2020 08:41	590447	0.49		50
440-258875-7	01/17/2020 08:41	590447	0.49		50
440-258875-8	01/17/2020 08:41	590447	0.51		50
440-258875-9	01/17/2020 08:41	590447	0.49		50
440-258875-11	01/17/2020 08:41	590447	0.49		50
440-258875-12	01/17/2020 08:41	590447	0.50		50
440-258875-13	01/17/2020 08:41	590447	0.51		50
440-258875-14	01/17/2020 08:41	590447	0.50		50
440-258875-15	01/17/2020 08:41	590447	0.49		50
440-258875-16	01/17/2020 08:41	590447	0.50		50
440-258875-17	01/17/2020 08:41	590447	0.50		50
440-258875-19	01/17/2020 08:41	590447	0.49		50
440-258875-20	01/17/2020 08:41	590447	0.49		50

13-IN  
ANALYSIS RUN LOG  
METALS

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG No.:

Instrument ID: ICP8

Analysis Method: 6010B

Start Date: 01/15/2020 11:50

End Date: 01/15/2020 17:29

13-IN  
ANALYSIS RUN LOG  
METALS

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG No.: \_\_\_\_\_

Instrument ID: ICP8

Analysis Method: 6010B

Start Date: 01/15/2020 11:50

End Date: 01/15/2020 17:29

Lab Sample Id	D/F	T Y p e	Time	Analytes															
				A l	B a	C e	F e	K i	L g	M a	N g	P a	S n	S r	T i				
ZZZZZZ			14:11																
ZZZZZZ			14:13																
CCV 440-590755/45			14:38																
ZZZZZZ			14:40																
CCB 440-590755/47			14:44																
ZZZZZZ			14:46																
ZZZZZZ			14:48																
ZZZZZZ			14:50																
ZZZZZZ			14:53																
ZZZZZZ			14:55																
ZZZZZZ			14:57																
ZZZZZZ			14:59																
ZZZZZZ			15:01																
ZZZZZZ			15:04																
ZZZZZZ			15:06																
CCV 440-590755/58	1		15:11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CCB 440-590755/59	1		15:16	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ZZZZZZ			15:19																
ZZZZZZ			15:21																
ZZZZZZ			15:23																
ZZZZZZ			15:25																
ZZZZZZ			15:27																
MB 440-590297/1-A ^5	5	T	15:30	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
LCS 440-590297/2-A ^5	5	T	15:33	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
440-258875-1 SD	25	T	15:35	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
440-258875-1	5	T	15:37	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CCV 440-590755/69	1		16:00	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CCB 440-590755/70	1		16:06	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
440-258875-1 MS	5	T	16:08	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
440-258875-1 MSD	5	T	16:10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
440-258875-1 PDS	5	T	16:12	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
440-258875-2	5	T	16:14	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
440-258875-3	5	T	16:17	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
440-258875-4	5	T	16:19	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
440-258875-5	5	T	16:21	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
440-258875-6	5	T	16:23	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
440-258875-7	5	T	16:25	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
440-258875-8	5	T	16:28	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CCV 440-590755/81	1		16:34	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CCB 440-590755/82	1		16:38	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
440-258875-9	5	T	16:47	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
440-258875-11	5	T	16:49	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

13-IN  
ANALYSIS RUN LOG  
METALS

Lab Name: Eurofins Irvine Job No.: 440-258875-1

SDG No.:

Instrument ID: ICP8 Analysis Method: 6010B

Start Date: 01/15/2020 11:50 End Date: 01/15/2020 17:29

Prep Types:

13-IN  
ANALYSIS RUN LOG  
METALS

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG No.: \_\_\_\_\_

Instrument ID: ICPMS6

Analysis Method: 6020

Start Date: 01/14/2020 14:48

End Date: 01/14/2020 17:11

Lab Sample Id	D/F	T Y p e	Time	Analytes															
				A g s a e d c o r u n M o i b P S b e l T V Z n															
STD0 440-590542/1 IC		1	14:48	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
STD1 440-590542/2 IC		1	14:50	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
STD2 440-590542/3 IC		1	14:52	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
STD3 440-590542/4 IC		1	14:54	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
STD4 440-590542/5 IC		1	14:56	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ICV 440-590542/6		1	14:58	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ZZZZZZ			15:00																
ICB 440-590542/8		1	15:02	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ZZZZZZ			15:04																
CRI 440-590542/10		1	15:07	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CRI 440-590542/11		1	15:09	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ICSA 440-590542/12		1	15:11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ICSAB 440-590542/13		1	15:14	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CCV 440-590542/14		1	15:33	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CCB 440-590542/15		1	15:35	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
MB 440-590297/1-A ^20	20	T	15:37	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
LCS 440-590297/2-A ^20	20	T	15:39	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
440-258875-1		20	T	15:41	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
440-258875-1 MS		20	T	15:43	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
440-258875-1 MSD		20	T	15:45	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
440-258875-1 PDS		20	T	15:47	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
440-258875-1 SD	100	T	15:53	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CCV 440-590542/23		1	16:00	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CCB 440-590542/24		1	16:02	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
440-258875-2		20	T	16:04	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
440-258875-3		20	T	16:06	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
440-258875-4		20	T	16:08	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
440-258875-5		20	T	16:10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
440-258875-6		20	T	16:12	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
440-258875-7		20	T	16:14	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
440-258875-8		20	T	16:16	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
440-258875-9		20	T	16:18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
440-258875-11		20	T	16:21	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
440-258875-12		20	T	16:23	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CCV 440-590542/35		1	16:38	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CCB 440-590542/36		1	16:40	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
440-258875-13		20	T	16:42	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
440-258875-14		20	T	16:45	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
440-258875-15		20	T	16:47	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
440-258875-16		20	T	16:49	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
440-258875-17		20	T	16:51	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
440-258875-19		20	T	16:53	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

13-IN  
ANALYSIS RUN LOG  
METALS

Lab Name: Eurofins Irvine Job No.: 440-258875-1

SDG No.:

Instrument ID: ICPMS6 Analysis Method: 6020

Start Date: 01/14/2020 14:48 End Date: 01/14/2020 17:11

Prep Types:  
T = Total/NA

13-IN  
ANALYSIS RUN LOG  
METALS

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG No.: \_\_\_\_\_

Instrument ID: CV-HG4

Analysis Method: 7471A

Start Date: 01/20/2020 12:12

End Date: 01/20/2020 17:44

Lab Sample Id	D/F	T Y P E	Time	Analytes															
				H	G														
IC 440-591352/6-A			12:12	X															
IC 440-591352/7-A			12:14	X															
IC 440-591352/8-A			12:16	X															
IC 440-591352/9-A			12:19	X															
IC 440-591352/10-A			12:21	X															
IC 440-591352/11-A			12:23	X															
ICV 440-591352/1-A	1		12:26	X															
ICB 440-591352/2-A	1		12:29	X															
CRA 440-591352/5-A	1		12:32	X															
CCV 440-591352/3-A	1		12:34	X															
CCB 440-591352/4-A	1		12:36	X															
MB 440-590447/1-A	1	T	12:39	X															
LCS 440-590447/2-A	1	T	12:41	X															
440-258875-1	1	T	12:43	X															
440-258875-1 MS	1	T	12:46	X															
440-258875-1 MSD	1	T	12:48	X															
440-258875-2	1	T	12:51	X															
440-258875-3	1	T	12:54	X															
440-258875-4	1	T	12:57	X															
440-258875-5	1	T	12:59	X															
440-258875-6	1	T	13:01	X															
CCV 440-591352/3-A	1		13:03	X															
CCB 440-591352/4-A	1		13:05	X															
440-258875-7	1	T	13:08	X															
440-258875-8	1	T	13:11	X															
440-258875-9	1	T	13:13	X															
440-258875-11	1	T	13:15	X															
440-258875-12	1	T	13:17	X															
440-258875-13	1	T	13:19	X															
440-258875-14	1	T	13:22	X															
440-258875-15	1	T	13:24	X															
440-258875-16	1	T	13:26	X															
440-258875-17	1	T	13:28	X															
CCV 440-591352/3-A	1		13:30	X															
CCB 440-591352/4-A	1		13:33	X															
440-258875-19	1	T	13:35	X															
440-258875-20	1	T	13:37	X															
ZZZZZZ			13:40																
ZZZZZZ			13:42																
ZZZZZZ			13:45																
CRA 440-591352/5-A	1		13:47	X															
CCV 440-591352/3-A	1		13:50	X															

13-IN  
ANALYSIS RUN LOG  
METALS

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG No.: \_\_\_\_\_

Instrument ID: CV-HG4

Analysis Method: 7471A

Start Date: 01/20/2020 12:12

End Date: 01/20/2020 17:44

Lab Sample Id	D/F	T Y P E	Time	Analytes															
				H	G														
CCB 440-591352/4-A	1		13:52	X															
CCV 440-591352/3-A			13:59																
CCB 440-591352/4-A			14:01																
ZZZZZZ			14:04																
ZZZZZZ			14:06																
ZZZZZZ			14:08																
ZZZZZZ			14:11																
ZZZZZZ			14:13																
ZZZZZZ			14:17																
ZZZZZZ			14:20																
ZZZZZZ			14:22																
ZZZZZZ			14:25																
ZZZZZZ			14:28																
CCV 440-591352/3-A			14:30																
CCB 440-591352/4-A			14:33																
ZZZZZZ			14:35																
ZZZZZZ			14:38																
ZZZZZZ			14:40																
ZZZZZZ			14:43																
ZZZZZZ			14:46																
ZZZZZZ			14:48																
ZZZZZZ			14:51																
ZZZZZZ			14:53																
ZZZZZZ			14:56																
ZZZZZZ			14:58																
CCV 440-591352/3-A			15:00																
CCB 440-591352/4-A			15:02																
ZZZZZZ			15:05																
ZZZZZZ			15:08																
ZZZZZZ			15:10																
ZZZZZZ			15:13																
ZZZZZZ			15:15																
CRA 440-591352/5-A			15:17																
CCV 440-591352/3-A			15:19																
CCB 440-591352/4-A			15:22																
CCV 440-591352/3-A			15:36																
CCB 440-591352/4-A			15:38																
ZZZZZZ			15:41																
ZZZZZZ			15:43																
ZZZZZZ			15:45																
ZZZZZZ			15:48																
ZZZZZZ			15:51																

13-IN  
ANALYSIS RUN LOG  
METALS

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG No.: \_\_\_\_\_

Instrument ID: CV-HG4

Analysis Method: 7471A

Start Date: 01/20/2020 12:12

End Date: 01/20/2020 17:44

Lab Sample Id	D/F	T Y P E	Time	Analytes												
				H	G											
ZZZZZZ			15:54													
ZZZZZZ			15:57													
ZZZZZZ			16:00													
ZZZZZZ			16:03													
ZZZZZZ			16:05													
CCV 440-591352/3-A			16:07													
CCB 440-591352/4-A			16:10													
ZZZZZZ			16:13													
ZZZZZZ			16:15													
ZZZZZZ			16:17													
ZZZZZZ			16:20													
ZZZZZZ			16:22													
ZZZZZZ			16:25													
ZZZZZZ			16:27													
ZZZZZZ			16:29													
ZZZZZZ			16:32													
ZZZZZZ			16:34													
CCV 440-591352/3-A			16:37													
CCB 440-591352/4-A			16:40													
ZZZZZZ			16:43													
ZZZZZZ			16:45													
ZZZZZZ			16:48													
ZZZZZZ			16:50													
CRA 440-591352/5-A			16:53													
CCV 440-591352/3-A			16:55													
CCB 440-591352/4-A			16:58													
CCV 440-591352/3-A			17:01													
CCB 440-591352/4-A			17:03													
ZZZZZZ			17:06													
ZZZZZZ			17:08													
ZZZZZZ			17:11													
ZZZZZZ			17:13													
ZZZZZZ			17:15													
ZZZZZZ			17:19													
ZZZZZZ			17:22													
ZZZZZZ			17:24													
ZZZZZZ			17:26													
ZZZZZZ			17:29													
CCV 440-591352/3-A			17:32													
CCB 440-591352/4-A			17:35													
ZZZZZZ			17:38													
CRA 440-591352/5-A			17:40													

13-IN  
ANALYSIS RUN LOG  
METALS

Lab Name: Eurofins Irvine Job No.: 440-258875-1

SDG No.: \_\_\_\_\_

Instrument ID: CV-HG4 Analysis Method: 7471A

Start Date: 01/20/2020 12:12 End Date: 01/20/2020 17:44

Lab Sample Id	D/F	T Y p e	Time	Analytes																
				H	G															
CCV 440-591352/3-A			17:42																	
CCB 440-591352/4-A			17:44																	

Prep Types:

T = Total/NA

15-IN  
ICP INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY  
METALS

Lab Name: Eurofins Irvine Job No.: 440-258875-1

SDG No.: \_\_\_\_\_

ICP Instrument ID: ICP8 Start Date: 01/15/2020 End Date: 01/15/2020

Lab Sample ID	Time	Internal Standards %RI For:							
		Element Y 371.029	Q	Element	Q	Element	Q	Element	Q
ICIS 440-590755/1	11:50								
ICV 440-590755/6	12:15	100							
ICV 440-590755/8	12:19	100							
ICB 440-590755/10	12:24	100							
ICSA 440-590755/11	12:32	84							
ICSAB 440-590755/12	12:35	84							
CRI 440-590755/16	12:43	100							
CCV 440-590755/58	15:11	97							
CCB 440-590755/59	15:16	97							
MB 440-590297/1-A ^5	15:30	97							
LCS 440-590297/2-A ^5	15:33	97							
440-258875-1 SD	15:35	96							
440-258875-1	15:37	94							
CCV 440-590755/69	16:00	97							
CCB 440-590755/70	16:06	97							
440-258875-1 MS	16:08	94							
440-258875-1 MSD	16:10	93							
440-258875-1 PDS	16:12	94							
440-258875-2	16:14	94							
440-258875-3	16:17	95							
440-258875-4	16:19	94							
440-258875-5	16:21	94							
440-258875-6	16:23	94							
440-258875-7	16:25	94							
440-258875-8	16:28	94							
CCV 440-590755/81	16:34	96							
CCB 440-590755/82	16:38	97							
440-258875-9	16:47	95							
440-258875-11	16:49	95							
440-258875-12	16:52	95							
440-258875-13	16:54	95							
440-258875-14	16:56	95							
440-258875-15	16:58	95							
440-258875-16	17:00	95							
440-258875-17	17:03	95							
440-258875-19	17:05	94							
440-258875-20	17:07	95							
CCV 440-590755/93	17:19	97							
CCB 440-590755/94	17:23	98							

15-IN  
ICP INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY  
METALS

Lab Name: Eurofins Irvine Job No.: 440-258875-1

SDG No.: \_\_\_\_\_

ICP Instrument ID: ICP8 Start Date: 01/15/2020 End Date: 01/15/2020

Lab Sample ID	Time	Internal Standards %RI For:							
		Element Y 371.029	Q	Element	Q	Element	Q	Element	Q
CRI 440-590755/95	17:25	98							
ICSA 440-590755/96	17:27	83							
ICSAB 440-590755/97	17:29	83							

15-IN  
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY  
METALS

Lab Name: Eurofins Irvine Job No.: 440-258875-1  
SDG No.: \_\_\_\_\_  
ICP-MS Instrument ID: ICPMS6 Start Date: 01/14/2020 End Date: 01/14/2020

Lab Sample ID	Time	Internal Standards %RI For:							
		Element Sc-45	Q	Element Ge	Q	Element In-115	Q	Element Tb-159	Q
STD0 440-590542/1 IC	14:48	100		100		100		100	
STD1 440-590542/2 IC	14:50	100		100		100		100	
STD2 440-590542/3 IC	14:52	99		100		100		100	
STD3 440-590542/4 IC	14:54	101		101		102		102	
STD4 440-590542/5 IC	14:56	99		100		100		102	
ICV 440-590542/6	14:58	100		101		100		101	
ICB 440-590542/8	15:02	98		98		99		101	
CRI 440-590542/10	15:07	98		98		99		101	
CRI 440-590542/11	15:09	98		98		100		101	
ICSA 440-590542/12	15:11	102		99		96		100	
ICSAB 440-590542/13	15:14	112		106		100		101	
CCV 440-590542/14	15:33	101		102		101		102	
CCB 440-590542/15	15:35	99		100		99		101	
MB 440-590297/1-A ^20	15:37	98		98		97		98	
LCS 440-590297/2-A ^20	15:39	99		99		98		99	
440-258875-1	15:41	102		101		97		100	
440-258875-1 MS	15:43	103		100		98		99	
440-258875-1 MSD	15:45	104		100		97		100	
440-258875-1 PDS	15:47	102		100		96		99	
440-258875-1 SD	15:53	103		101		100		101	
CCV 440-590542/23	16:00	101		101		99		100	
CCB 440-590542/24	16:02	98		99		98		99	
440-258875-2	16:04	102		99		96		98	
440-258875-3	16:06	102		99		96		98	
440-258875-4	16:08	100		98		95		97	
440-258875-5	16:10	101		98		95		98	
440-258875-6	16:12	100		98		95		98	
440-258875-7	16:14	100		98		95		98	
440-258875-8	16:16	102		100		97		99	
440-258875-9	16:18	103		100		97		98	
440-258875-11	16:21	104		101		97		99	
440-258875-12	16:23	104		101		97		99	
CCV 440-590542/35	16:38	103		104		102		101	
CCB 440-590542/36	16:40	101		101		100		99	
440-258875-13	16:42	105		102		98		99	
440-258875-14	16:45	103		102		97		99	
440-258875-15	16:47	104		101		98		100	

15-IN  
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY  
METALS

Lab Name: Eurofins Irvine Job No.: 440-258875-1

SDG No.: \_\_\_\_\_

ICP-MS Instrument ID: ICPMS6 Start Date: 01/14/2020 End Date: 01/14/2020

Lab Sample ID	Time	Internal Standards %RI For:							
		Element Sc-45	Q	Element Ge	Q	Element In-115	Q	Element Tb-159	Q
440-258875-16	16:49	103		100		98		100	
440-258875-17	16:51	103		101		98		100	
440-258875-19	16:53	102		100		97		100	
440-258875-20	16:55	103		101		98		100	
CCV 440-590542/44	17:02	100		101		99		99	
CCB 440-590542/45	17:04	99		100		99		99	
CRI 440-590542/46	17:06	100		100		100		100	
ICSA 440-590542/47	17:08	102		99		95		99	
ICSAB 440-590542/48	17:11	111		106		99		99	

## METALS BATCH WORKSHEET

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG No.:

Batch Number: 590297

Batch Start Date: 01/13/20 16:29

Batch Analyst: Tan, Sarah

Batch Method: 3050B

Batch End Date: 01/14/20 14:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ICP STD A 00003	ICP STD B 00003	ME 1:1 HNO3 00292	ME 30% H2O2 00110
MB 440-590297/1		3050B, 6010B		2.00 g	50 mL			5 mL	3 mL
LCS 440-590297/2		3050B, 6010B		1.99 g	50 mL	0.5 mL	0.5 mL	5 mL	3 mL
440-258875-B-1	WRSB208_0-0.5	3050B, 6010B	T	1.99 g	50 mL			5 mL	3 mL
440-258875-B-1 MS	WRSB208_0-0.5	3050B, 6010B	T	1.97 g	50 mL	0.5 mL	0.5 mL	5 mL	3 mL
440-258875-B-1 MSD	WRSB208_0-0.5	3050B, 6010B	T	1.99 g	50 mL	0.5 mL	0.5 mL	5 mL	3 mL
440-258875-B-2	WRSB208_0.5-3	3050B, 6010B	T	1.98 g	50 mL			5 mL	3 mL
440-258875-B-3	WRSB208_3-6	3050B, 6010B	T	1.99 g	50 mL			5 mL	3 mL
440-258875-B-4	WRSB208_6-15	3050B, 6010B	T	1.99 g	50 mL			5 mL	3 mL
440-258875-B-5	WRSB208_15-25	3050B, 6010B	T	2.01 g	50 mL			5 mL	3 mL
440-258875-B-6	WRSB208-FD_15-25	3050B, 6010B	T	2.04 g	50 mL			5 mL	3 mL
440-258875-B-7	WRSB208_25-35	3050B, 6010B	T	1.97 g	50 mL			5 mL	3 mL
440-258875-B-8	WRSB208_35-45	3050B, 6010B	T	1.96 g	50 mL			5 mL	3 mL
440-258875-B-9	WRSB208_45-55	3050B, 6010B	T	1.97 g	50 mL			5 mL	3 mL
440-258875-B-11	WRSB208_55-65	3050B, 6010B	T	1.96 g	50 mL			5 mL	3 mL
440-258875-B-12	WRSB208_65-75	3050B, 6010B	T	1.98 g	50 mL			5 mL	3 mL
440-258875-B-13	WRSB208-FD_65-75	3050B, 6010B	T	2.00 g	50 mL			5 mL	3 mL
440-258875-B-14	WRSB208_75-85	3050B, 6010B	T	1.96 g	50 mL			5 mL	3 mL
440-258875-B-15	WRSB208_85-95	3050B, 6010B	T	1.99 g	50 mL			5 mL	3 mL
440-258875-B-16	WRSB208_95-105	3050B, 6010B	T	1.99 g	50 mL			5 mL	3 mL
440-258875-B-17	WRSB208_105-115	3050B, 6010B	T	1.98 g	50 mL			5 mL	3 mL
440-258875-B-19	WRSB208_115-125	3050B, 6010B	T	1.96 g	50 mL			5 mL	3 mL
440-258875-B-20	WRSB208_125-131. 5	3050B, 6010B	T	2.02 g	50 mL			5 mL	3 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	ME HCl 00551	ME HNO3 00548				
MB 440-590297/1		3050B, 6010B		5 mL	5 mL				
LCS 440-590297/2		3050B, 6010B		5 mL	5 mL				
440-258875-B-1	WRSB208_0-0.5	3050B, 6010B	T	5 mL	5 mL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

## METALS BATCH WORKSHEET

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG No.: \_\_\_\_\_

Batch Number: 590297

Batch Start Date: 01/13/20 16:29

Batch Analyst: Tan, Sarah

Batch Method: 3050B

Batch End Date: 01/14/20 14:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	ME HCl 00551	ME HNO3 00548				
440-258875-B-1 MS	WRSB208_0-0.5	3050B, 6010B	T	5 mL	5 mL				
440-258875-B-1 MSD	WRSB208_0-0.5	3050B, 6010B	T	5 mL	5 mL				
440-258875-B-2	WRSB208_0.5-3	3050B, 6010B	T	5 mL	5 mL				
440-258875-B-3	WRSB208_3-6	3050B, 6010B	T	5 mL	5 mL				
440-258875-B-4	WRSB208_6-15	3050B, 6010B	T	5 mL	5 mL				
440-258875-B-5	WRSB208_15-25	3050B, 6010B	T	5 mL	5 mL				
440-258875-B-6	WRSB208-FD_15-25	3050B, 6010B	T	5 mL	5 mL				
440-258875-B-7	WRSB208_25-35	3050B, 6010B	T	5 mL	5 mL				
440-258875-B-8	WRSB208_35-45	3050B, 6010B	T	5 mL	5 mL				
440-258875-B-9	WRSB208_45-55	3050B, 6010B	T	5 mL	5 mL				
440-258875-B-11	WRSB208_55-65	3050B, 6010B	T	5 mL	5 mL				
440-258875-B-12	WRSB208_65-75	3050B, 6010B	T	5 mL	5 mL				
440-258875-B-13	WRSB208-FD_65-75	3050B, 6010B	T	5 mL	5 mL				
440-258875-B-14	WRSB208_75-85	3050B, 6010B	T	5 mL	5 mL				
440-258875-B-15	WRSB208_85-95	3050B, 6010B	T	5 mL	5 mL				
440-258875-B-16	WRSB208_95-105	3050B, 6010B	T	5 mL	5 mL				
440-258875-B-17	WRSB208_105-115	3050B, 6010B	T	5 mL	5 mL				
440-258875-B-19	WRSB208_115-125	3050B, 6010B	T	5 mL	5 mL				
440-258875-B-20	WRSB208_125-131. 5	3050B, 6010B	T	5 mL	5 mL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

## METALS BATCH WORKSHEET

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG No.:

Batch Number: 590297

Batch Start Date: 01/13/20 16:29

Batch Analyst: Tan, Sarah

Batch Method: 3050B

Batch End Date: 01/14/20 14:00

Batch Notes	
Balance ID	57
Batch Comment	Spike A&B= 500 ul
Blank Soil Lot Number	25438819
Temperature - Corrected - End	94 Degrees C
Temperature - Corrected - Start	90 Degrees C
Digestion End Time	01/14/2020 12:55
Digestion Start Time	01/14/2020 09:10
Digestion Unit ID	3
Digestion Tube/Cup ID	1906257
Filter ID	19-107 Gr. 389
Hydrogen Peroxide ID	6019234
Hydrochloric Acid ID	5999212
Nitric Acid ID	5997059
Pipette/Syringe/Dispenser ID	#902
Analyst ID - Spike Analyst	NE
Thermometer ID	P-090 (Loc.#B14) CF=-1
Temperature - Uncorrected - End	95 Degrees C
Temperature - Uncorrected - Start	91 Degrees C

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

## METALS BATCH WORKSHEET

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG No.:

Batch Number: 590297

Batch Start Date: 01/13/20 16:29

Batch Analyst: Tan, Sarah

Batch Method: 3050B

Batch End Date: 01/14/20 14:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ICP STD A 00003	ICP STD B 00003	ME 1:1 HNO3 00292	ME 30% H2O2 00110
MB 440-590297/1		3050B, 6020		2.00 g	50 mL			5 mL	3 mL
LCS 440-590297/2		3050B, 6020		1.99 g	50 mL	0.5 mL	0.5 mL	5 mL	3 mL
440-258875-B-1	WRSB208_0-0.5	3050B, 6020	T	1.99 g	50 mL			5 mL	3 mL
440-258875-B-1 MS	WRSB208_0-0.5	3050B, 6020	T	1.97 g	50 mL	0.5 mL	0.5 mL	5 mL	3 mL
440-258875-B-1 MSD	WRSB208_0-0.5	3050B, 6020	T	1.99 g	50 mL	0.5 mL	0.5 mL	5 mL	3 mL
440-258875-B-2	WRSB208_0.5-3	3050B, 6020	T	1.98 g	50 mL			5 mL	3 mL
440-258875-B-3	WRSB208_3-6	3050B, 6020	T	1.99 g	50 mL			5 mL	3 mL
440-258875-B-4	WRSB208_6-15	3050B, 6020	T	1.99 g	50 mL			5 mL	3 mL
440-258875-B-5	WRSB208_15-25	3050B, 6020	T	2.01 g	50 mL			5 mL	3 mL
440-258875-B-6	WRSB208-FD_15-25	3050B, 6020	T	2.04 g	50 mL			5 mL	3 mL
440-258875-B-7	WRSB208_25-35	3050B, 6020	T	1.97 g	50 mL			5 mL	3 mL
440-258875-B-8	WRSB208_35-45	3050B, 6020	T	1.96 g	50 mL			5 mL	3 mL
440-258875-B-9	WRSB208_45-55	3050B, 6020	T	1.97 g	50 mL			5 mL	3 mL
440-258875-B-11	WRSB208_55-65	3050B, 6020	T	1.96 g	50 mL			5 mL	3 mL
440-258875-B-12	WRSB208_65-75	3050B, 6020	T	1.98 g	50 mL			5 mL	3 mL
440-258875-B-13	WRSB208-FD_65-75	3050B, 6020	T	2.00 g	50 mL			5 mL	3 mL
440-258875-B-14	WRSB208_75-85	3050B, 6020	T	1.96 g	50 mL			5 mL	3 mL
440-258875-B-15	WRSB208_85-95	3050B, 6020	T	1.99 g	50 mL			5 mL	3 mL
440-258875-B-16	WRSB208_95-105	3050B, 6020	T	1.99 g	50 mL			5 mL	3 mL
440-258875-B-17	WRSB208_105-115	3050B, 6020	T	1.98 g	50 mL			5 mL	3 mL
440-258875-B-19	WRSB208_115-125	3050B, 6020	T	1.96 g	50 mL			5 mL	3 mL
440-258875-B-20	WRSB208_125-131. 5	3050B, 6020	T	2.02 g	50 mL			5 mL	3 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	ME HCl 00551	ME HNO3 00548				
MB 440-590297/1		3050B, 6020		5 mL	5 mL				
LCS 440-590297/2		3050B, 6020		5 mL	5 mL				
440-258875-B-1	WRSB208_0-0.5	3050B, 6020	T	5 mL	5 mL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

## METALS BATCH WORKSHEET

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG No.: \_\_\_\_\_

Batch Number: 590297

Batch Start Date: 01/13/20 16:29

Batch Analyst: Tan, Sarah

Batch Method: 3050B

Batch End Date: 01/14/20 14:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	ME HCl 00551	ME HNO3 00548				
440-258875-B-1 MS	WRSB208_0-0.5	3050B, 6020	T	5 mL	5 mL				
440-258875-B-1 MSD	WRSB208_0-0.5	3050B, 6020	T	5 mL	5 mL				
440-258875-B-2	WRSB208_0.5-3	3050B, 6020	T	5 mL	5 mL				
440-258875-B-3	WRSB208_3-6	3050B, 6020	T	5 mL	5 mL				
440-258875-B-4	WRSB208_6-15	3050B, 6020	T	5 mL	5 mL				
440-258875-B-5	WRSB208_15-25	3050B, 6020	T	5 mL	5 mL				
440-258875-B-6	WRSB208-FD_15-25	3050B, 6020	T	5 mL	5 mL				
440-258875-B-7	WRSB208_25-35	3050B, 6020	T	5 mL	5 mL				
440-258875-B-8	WRSB208_35-45	3050B, 6020	T	5 mL	5 mL				
440-258875-B-9	WRSB208_45-55	3050B, 6020	T	5 mL	5 mL				
440-258875-B-11	WRSB208_55-65	3050B, 6020	T	5 mL	5 mL				
440-258875-B-12	WRSB208_65-75	3050B, 6020	T	5 mL	5 mL				
440-258875-B-13	WRSB208-FD_65-75	3050B, 6020	T	5 mL	5 mL				
440-258875-B-14	WRSB208_75-85	3050B, 6020	T	5 mL	5 mL				
440-258875-B-15	WRSB208_85-95	3050B, 6020	T	5 mL	5 mL				
440-258875-B-16	WRSB208_95-105	3050B, 6020	T	5 mL	5 mL				
440-258875-B-17	WRSB208_105-115	3050B, 6020	T	5 mL	5 mL				
440-258875-B-19	WRSB208_115-125	3050B, 6020	T	5 mL	5 mL				
440-258875-B-20	WRSB208_125-131. 5	3050B, 6020	T	5 mL	5 mL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

## METALS BATCH WORKSHEET

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG No.:

Batch Number: 590297

Batch Start Date: 01/13/20 16:29

Batch Analyst: Tan, Sarah

Batch Method: 3050B

Batch End Date: 01/14/20 14:00

Batch Notes	
Balance ID	57
Batch Comment	Spike A&B= 500 ul
Blank Soil Lot Number	25438819
Temperature - Corrected - End	94 Degrees C
Temperature - Corrected - Start	90 Degrees C
Digestion End Time	01/14/2020 12:55
Digestion Start Time	01/14/2020 09:10
Digestion Unit ID	3
Digestion Tube/Cup ID	1906257
Filter ID	19-107 Gr. 389
Hydrogen Peroxide ID	6019234
Hydrochloric Acid ID	5999212
Nitric Acid ID	5997059
Pipette/Syringe/Dispenser ID	#902
Analyst ID - Spike Analyst	NE
Thermometer ID	P-090 (Loc.#B14) CF=-1
Temperature - Uncorrected - End	95 Degrees C
Temperature - Uncorrected - Start	91 Degrees C

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

## METALS BATCH WORKSHEET

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG No.:

Batch Number: 590447

Batch Start Date: 01/17/20 08:41

Batch Analyst: Mercado, Michael E

Batch Method: 7471A

Batch End Date: 01/20/20 11:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ME 1 PPM HG1 00416	ME Aqua Regia 00791	ME HYDROX SOL 00117	ME KMNO4 00189
MB 440-590447/1		7471A, 7471A		0.50 g	50 mL		4.2 mL	5 mL	12.4 mL
LCS 440-590447/2		7471A, 7471A		0.50 g	50 mL	200 uL	4.2 mL	5 mL	12.4 mL
440-258875-B-1	WRSB208_0-0.5	7471A, 7471A	T	0.51 g	50 mL		4.2 mL	5 mL	12.4 mL
440-258875-B-1 MS	WRSB208_0-0.5	7471A, 7471A	T	0.50 g	50 mL	200 uL	4.2 mL	5 mL	12.4 mL
440-258875-B-1 MSD	WRSB208_0-0.5	7471A, 7471A	T	0.50 g	50 mL	200 uL	4.2 mL	5 mL	12.4 mL
440-258875-B-2	WRSB208_0.5-3	7471A, 7471A	T	0.50 g	50 mL		4.2 mL	5 mL	12.4 mL
440-258875-B-3	WRSB208_3-6	7471A, 7471A	T	0.49 g	50 mL		4.2 mL	5 mL	12.4 mL
440-258875-B-4	WRSB208_6-15	7471A, 7471A	T	0.49 g	50 mL		4.2 mL	5 mL	12.4 mL
440-258875-B-5	WRSB208_15-25	7471A, 7471A	T	0.51 g	50 mL		4.2 mL	5 mL	12.4 mL
440-258875-B-6	WRSB208-FD_15-25	7471A, 7471A	T	0.49 g	50 mL		4.2 mL	5 mL	12.4 mL
440-258875-B-7	WRSB208_25-35	7471A, 7471A	T	0.49 g	50 mL		4.2 mL	5 mL	12.4 mL
440-258875-B-8	WRSB208_35-45	7471A, 7471A	T	0.51 g	50 mL		4.2 mL	5 mL	12.4 mL
440-258875-B-9	WRSB208_45-55	7471A, 7471A	T	0.49 g	50 mL		4.2 mL	5 mL	12.4 mL
440-258875-B-11	WRSB208_55-65	7471A, 7471A	T	0.49 g	50 mL		4.2 mL	5 mL	12.4 mL
440-258875-B-12	WRSB208_65-75	7471A, 7471A	T	0.50 g	50 mL		4.2 mL	5 mL	12.4 mL
440-258875-B-13	WRSB208-FD_65-75	7471A, 7471A	T	0.51 g	50 mL		4.2 mL	5 mL	12.4 mL
440-258875-B-14	WRSB208_75-85	7471A, 7471A	T	0.50 g	50 mL		4.2 mL	5 mL	12.4 mL
440-258875-B-15	WRSB208_85-95	7471A, 7471A	T	0.49 g	50 mL		4.2 mL	5 mL	12.4 mL
440-258875-B-16	WRSB208_95-105	7471A, 7471A	T	0.50 g	50 mL		4.2 mL	5 mL	12.4 mL
440-258875-B-17	WRSB208_105-115	7471A, 7471A	T	0.50 g	50 mL		4.2 mL	5 mL	12.4 mL
440-258875-B-19	WRSB208_115-125	7471A, 7471A	T	0.49 g	50 mL		4.2 mL	5 mL	12.4 mL
440-258875-B-20	WRSB208_125-131. 5	7471A, 7471A	T	0.49 g	50 mL		4.2 mL	5 mL	12.4 mL

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

## METALS BATCH WORKSHEET

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG No.:

Batch Number: 590447

Batch Start Date: 01/17/20 08:41

Batch Analyst: Mercado, Michael E

Batch Method: 7471A

Batch End Date: 01/20/20 11:00

Batch Notes	
Balance ID	57
Batch Comment	MB Loc: B12, Weighed by AM, Filtered by ES
Blank Matrix ID	25438819
Temperature - Corrected - End	92 Degrees C
Temperature - Corrected - Start	92 Degrees C
Digestion End Time	01/17/2020 10:32
Digestion Start Time	01/17/2020 10:02
Digestion Unit ID	8
Hydrochloric Acid ID	Lot: 0000243992
Nitric Acid ID	Lot: 0000221803
Hydroxylamine ID	6040574 @1/20/20 @10:30
Potassium Permanganate ID	6040428
Pipette/Syringe/Dispenser ID	800
Analyst ID - Spike Analyst	MM
Thermometer ID	P-120 CF -1 Loc: C1
Digestion Tube/Cup ID	1906257
Temperature - Uncorrected - End	93 Degrees C
Temperature - Uncorrected - Start	93 Degrees C

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

## METALS BATCH WORKSHEET

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG No.:

Batch Number: 591352

Batch Start Date: 01/20/20 09:41

Batch Analyst: Mercado, Michael E

Batch Method: 7471A

Batch End Date: 01/20/20 11:24

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ME 1 PPM HG1 00418	ME 1 PPM HG1 00419	ME Aqua Regia 00792	ME HYDROX SOL 00117
ICV 440-591352/1		7471A, 7471A		0.50 g	50 mL		200 uL	4.2 mL	5 mL
ICB 440-591352/2		7471A, 7471A		0.50 g	50 mL			4.2 mL	5 mL
CCV 440-591352/3		7471A, 7471A		0.50 g	50 mL	200 uL		4.2 mL	5 mL
CCB 440-591352/4		7471A, 7471A		0.50 g	50 mL			4.2 mL	5 mL
CRA 440-591352/5		7471A, 7471A		0.50 g	50 mL	10 uL		4.2 mL	5 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	ME KMN04 00189					
ICV 440-591352/1		7471A, 7471A		12.4 mL					
ICB 440-591352/2		7471A, 7471A		12.4 mL					
CCV 440-591352/3		7471A, 7471A		12.4 mL					
CCB 440-591352/4		7471A, 7471A		12.4 mL					
CRA 440-591352/5		7471A, 7471A		12.4 mL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

7471A

Page 1 of 2

## METALS BATCH WORKSHEET

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG No.:

Batch Number: 591352

Batch Start Date: 01/20/20 09:41

Batch Analyst: Mercado, Michael E

Batch Method: 7471A

Batch End Date: 01/20/20 11:24

Batch Notes	
Balance ID	57
Batch Comment	ICB Loc: A6
Blank Matrix ID	25438819
Temperature - Corrected - End	95 Degrees C
Temperature - Corrected - Start	95 Degrees C
Digestion End Time	01/20/2020 10:40
Digestion Start Time	01/20/2020 10:10
Digestion Unit ID	12
Hydrochloric Acid ID	Lot: 0000243992
Nitric Acid ID	Lot: 0000221803
Hydroxylamine ID	6040574 @ 01/20/2020 11:14
Potassium Permanganate ID	6040428
Pipette/Syringe/Dispenser ID	800
Analyst ID - Spike Analyst	MM
Thermometer ID	P-128 CF +1 Loc: C2
Digestion Tube/Cup ID	1906257
Temperature - Uncorrected - End	94 Degrees C
Temperature - Uncorrected - Start	94 Degrees C

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Date created: 1/15/2020 10:55:31 AM

## Sequence table:

Rack:Tube	Sample Label	Weight (g)	Volume (mL)	Dilution
	IEC Blank	1.0	1.0	1.0
	STD3	1.0	1.0	1.0
	Al 600ppm	1.0	1.0	1.0
	Ca 600ppm	1.0	1.0	1.0
	Co 30ppm	1.0	1.0	1.0
	Cr 30ppm	1.0	1.0	1.0
	Cu 30ppm	1.0	1.0	1.0
	Fe 600ppm	1.0	1.0	1.0
	Mg 600ppm	1.0	1.0	1.0
	Mn 30ppm	1.0	1.0	1.0
	Mo 30ppm	1.0	1.0	1.0
	Ni 30ppm	1.0	1.0	1.0
	Sn 30ppm	1.0	1.0	1.0
	Ti 30ppm	1.0	1.0	1.0
	V 30ppm	1.0	1.0	1.0
	W 30ppm	1.0	1.0	1.0
	Zn 30ppm	1.0	1.0	1.0
	Zr 30ppm	1.0	1.0	1.0
S1:1	STD0 6043772	1.0	1.0	1.0
S1:2	STD1 6043775	1.0	1.0	1.0
S1:3	STD2 6043774	1.0	1.0	1.0
S1:4	STD3 6043773	1.0	1.0	1.0
S1:5	ICV 6043780	1.0	1.0	1.0
S1:5	ICV 6043780	1.0	1.0	1.0
S1:5	IPC 6043780	1.0	1.0	1.0
S1:11	ICV2 6043787	1.0	1.0	1.0
S1:11	IPC2 6043787	1.0	1.0	1.0
S1:1	ICB 6043772	1.0	1.0	1.0
S1:6	ICSA 6043781	1.0	1.0	1.0
S1:7	ICSAB 6043782	1.0	1.0	1.0
S1:8	xRINSE 6043786	1.0	1.0	1.0
S1:8	XICIS 6043785	1.0	1.0	1.0
S1:9	XCRI 6043783	1.0	1.0	1.0
S1:10	CRI 6043784	1.0	1.0	1.0
1:60	MB 440-589604/1-A@5	1.0	1.0	1.0
2:1	LCS 440-589604/2-A@5	1.0	1.0	1.0
2:2	LCS 440-589604/3-A@5	1.0	1.0	1.0
2:3	LCS 440-589604/4-A@5	1.0	1.0	1.0
2:4	LCS 440-589604/5-A@5	1.0	1.0	1.0
S1:4	CCV 6043773	1.0	1.0	1.0

Rack:Tube	Sample Label	Weight (g)	Volume (mL)	Dilution
S1:1	CCB 6043772	1.0	1.0	1.0
S1:1	CCB 6043772	1.0	1.0	1.0
1:1	440-258909-B-2-A@5	1.0	1.0	1.0
1:2	440-258909-B-3-A@5	1.0	1.0	1.0
1:3	440-258909-B-4-A@5	1.0	1.0	1.0
1:4	440-258909-B-6-A@5	1.0	1.0	1.0
1:5	440-258909-B-7-A@5	1.0	1.0	1.0
1:6	440-258909-B-8-A@5	1.0	1.0	1.0
1:7	440-258909-B-9-A@5	1.0	1.0	1.0
1:8	440-258909-B-10-A@5	1.0	1.0	1.0
1:9	440-258909-B-11-A@5	1.0	1.0	1.0
1:10	440-258909-B-12-A@5	1.0	1.0	1.0
S1:4	CCV 6043773	1.0	1.0	1.0
S1:1	CCB 6043772	1.0	1.0	1.0
1:11	440-258909-B-13-A@5	1.0	1.0	1.0
1:12	440-258909-B-14-A@5	1.0	1.0	1.0
1:13	440-258909-B-15-A@5	1.0	1.0	1.0
1:14	440-258909-B-16-A@5	1.0	1.0	1.0
1:15	440-258909-B-17-A@5	1.0	1.0	1.0
1:16	440-258909-B-18-A@5	1.0	1.0	1.0
1:17	440-258909-B-19-A@5	1.0	1.0	1.0
1:18	440-258909-B-20-A@5	1.0	1.0	1.0
1:19	440-258909-B-21-A@5	1.0	1.0	1.0
S1:4	CCV 6043773	1.0	1.0	1.0
S1:1	CCB 6043772	1.0	1.0	1.0
1:20	MB 440-590387/1-A@5	1.0	1.0	1.0
1:21	LCS 440-590387/2-A@5	1.0	1.0	1.0
2:5	440-258523-a-10-b	1.0	1.0	1.0
2:6	440-258523-a-10 BC unpr	1.0	1.0	1.0
2:7	440-258523-c-10 BC unpr	1.0	1.0	1.0
2:8	440-258523-f-10 BC	1.0	1.0	1.0
2:9	440-258523-e-10 BC	1.0	1.0	1.0
2:12	440-258523-a-10 BC	1.0	1.0	1.0
2:10	440-258527-C-1 bc	1.0	1.0	1.0
2:11	440-258527-C-2 bc	1.0	1.0	1.0
S1:4	CCV 6043773	1.0	1.0	1.0
S1:1	CCB 6043772	1.0	1.0	1.0
S1:1	CCB 6043772	1.0	1.0	1.0
1:22	440-258909-B-43-A SD@25	1.0	1.0	1.0
1:23	440-258909-B-43-A@5	1.0	1.0	1.0
1:24	440-258909-B-43-B MS@5	1.0	1.0	1.0
1:25	440-258909-B-43-C MSD@5	1.0	1.0	1.0
1:26	440-258909-B-43-A PDS@5	1.0	1.0	1.0
1:27	440-258909-B-44-A@5	1.0	1.0	1.0
1:28	440-258909-B-45-A@5	1.0	1.0	1.0

Rack:Tube	Sample Label	Weight (g)	Volume (mL)	Dilution
1:29	440-258909-B-46-A@5	1.0	1.0	1.0
1:30	440-258909-B-48-A@5	1.0	1.0	1.0
1:31	440-258906-B-1-A@5	1.0	1.0	1.0
S1:4	CCV 6043773	1.0	1.0	1.0
S1:1	CCB 6043772	1.0	1.0	1.0
1:32	440-258906-B-2-A@5	1.0	1.0	1.0
1:33	440-258906-B-3-A@5	1.0	1.0	1.0
1:34	440-258906-B-4-A@5	1.0	1.0	1.0
1:35	440-258906-B-5-A@5	1.0	1.0	1.0
S1:8	xRINSE 6043786	1.0	1.0	1.0
1:36	MB 440-590297/1-A@5	1.0	1.0	1.0
1:37	LCS 440-590297/2-A@5	1.0	1.0	1.0
1:38	440-258875-B-1-A SD@25	1.0	1.0	1.0
1:39	440-258875-B-1-A@5	1.0	1.0	1.0
S1:4	CCV 6043773	1.0	1.0	1.0
S1:1	CCB 6043772	1.0	1.0	1.0
1:40	440-258875-B-1-B MS@5	1.0	1.0	1.0
1:41	440-258875-B-1-C MSD@5	1.0	1.0	1.0
1:42	440-258875-B-1-A PDS@5	1.0	1.0	1.0
1:43	440-258875-B-2-A@5	1.0	1.0	1.0
1:44	440-258875-B-3-A@5	1.0	1.0	1.0
1:45	440-258875-B-4-A@5	1.0	1.0	1.0
1:46	440-258875-B-5-A@5	1.0	1.0	1.0
1:47	440-258875-B-6-A@5	1.0	1.0	1.0
1:48	440-258875-B-7-A@5	1.0	1.0	1.0
1:49	440-258875-B-8-A@5	1.0	1.0	1.0
S1:4	CCV 6043773	1.0	1.0	1.0
S1:1	CCB 6043772	1.0	1.0	1.0
1:50	440-258875-B-9-A@5	1.0	1.0	1.0
1:51	440-258875-B-11-A@5	1.0	1.0	1.0
1:52	440-258875-B-12-A@5	1.0	1.0	1.0
1:53	440-258875-B-13-A@5	1.0	1.0	1.0
1:54	440-258875-B-14-A@5	1.0	1.0	1.0
1:55	440-258875-B-15-A@5	1.0	1.0	1.0
1:56	440-258875-B-16-A@5	1.0	1.0	1.0
1:57	440-258875-B-17-A@5	1.0	1.0	1.0
1:58	440-258875-B-19-A@5	1.0	1.0	1.0
1:59	440-258875-B-20-A@5	1.0	1.0	1.0
S1:4	CCV 6043773	1.0	1.0	1.0
S1:1	CCB 6043772	1.0	1.0	1.0
S1:10	CRI 6043784	1.0	1.0	1.0
S1:6	ICSA 6043781	1.0	1.0	1.0
S1:7	ICSAB 6043782	1.0	1.0	1.0
S1:8	xRINSE 6043786	1.0	1.0	1.0
2:23	MB 440-590696/1-B	1.0	1.0	1.0

Rack:Tube	Sample Label	Weight (g)	Volume (mL)	Dilution
2:24	LCS 440-590696/2-B	1.0	1.0	1.0
2:25	440-259104-G-1-B	1.0	1.0	1.0
2:26	440-259104-G-1-C MS	1.0	1.0	1.0
2:27	440-259104-G-1-D MSD	1.0	1.0	1.0
S1:4	CCV 6043773	1.0	1.0	1.0
S1:1	CCB 6043772	1.0	1.0	1.0
2:13	MB 440-590647/1-A	1.0	1.0	1.0
2:14	LCS 440-590647/2-A	1.0	1.0	1.0
2:15	440-259110-A-1-A	1.0	1.0	1.0
2:16	440-259110-A-1-B MS	1.0	1.0	1.0
2:17	440-259110-A-1-C MSD	1.0	1.0	1.0
2:18	440-259110-A-2-A	1.0	1.0	1.0
2:19	440-259110-A-3-A	1.0	1.0	1.0
2:20	440-259110-A-4-A	1.0	1.0	1.0
2:21	440-259110-A-5-A	1.0	1.0	1.0
2:22	440-258650-E-1-A	1.0	1.0	1.0
S1:4	CCV 6043773	1.0	1.0	1.0
S1:1	CCB 6043772	1.0	1.0	1.0
2:28	MB 440-590699/1-A@5	1.0	1.0	1.0
2:29	LCS 440-590699/2-A@5	1.0	1.0	1.0
2:30	440-259135-C-1-A SD@25	1.0	1.0	1.0
2:31	440-259135-C-1-A@5	1.0	1.0	1.0
2:32	440-259135-C-1-B MS@5	1.0	1.0	1.0
2:33	440-259135-C-1-C MSD@5	1.0	1.0	1.0
2:34	440-259135-C-1-A PDS@5	1.0	1.0	1.0
S1:4	CCV 6043773	1.0	1.0	1.0
S1:1	CCB 6043772	1.0	1.0	1.0
2:35	440-259135-C-2-A@5	1.0	1.0	1.0
2:36	440-259135-C-3-A@5	1.0	1.0	1.0
2:37	440-259135-C-4-A@5	1.0	1.0	1.0
2:38	440-259135-C-5-A@5	1.0	1.0	1.0
2:39	440-259135-C-6-A@5	1.0	1.0	1.0
2:40	440-258676-D-1-H@5	1.0	1.0	1.0
S1:4	CCV 6043773	1.0	1.0	1.0
S1:1	CCB 6043772	1.0	1.0	1.0
S1:8	xRINSE 6043786	1.0	1.0	1.0
S1:4	CCV 6043773	1.0	1.0	1.0
S1:1	CCB 6043772	1.0	1.0	1.0
2:28	MB 440-590699/1-A@5	1.0	1.0	1.0
2:29	LCS 440-590699/2-A@5	1.0	1.0	1.0
2:30	440-259135-C-1-A SD@25	1.0	1.0	1.0
2:31	440-259135-C-1-A@5	1.0	1.0	1.0
2:32	440-259135-C-1-B MS@5	1.0	1.0	1.0
2:33	440-259135-C-1-C MSD@5	1.0	1.0	1.0
2:34	440-259135-C-1-A PDS@5	1.0	1.0	1.0

Rack:Tube	Sample Label	Weight (g)	Volume (mL)	Dilution
S1:4	CCV 6043773	1.0	1.0	1.0
S1:1	CCB 6043772	1.0	1.0	1.0
2:35	440-259135-C-2-A@5	1.0	1.0	1.0
2:36	440-259135-C-3-A@5	1.0	1.0	1.0
2:37	440-259135-C-4-A@5	1.0	1.0	1.0
2:38	440-259135-C-5-A@5	1.0	1.0	1.0
2:39	440-259135-C-6-A@5	1.0	1.0	1.0
2:40	440-258676-D-1-H@5	1.0	1.0	1.0
S1:8	xRINSE 6043786	1.0	1.0	1.0
S1:4	CCV 6043773	1.0	1.0	1.0
S1:1	CCB 6043772	1.0	1.0	1.0
2:41	MB 440-590692/1-A	1.0	1.0	1.0
2:42	LCS 440-590692/2-A	1.0	1.0	1.0
2:43	720-96900-E-1-A	1.0	1.0	1.0
2:44	720-96900-E-1-B MS	1.0	1.0	1.0
2:45	720-96900-E-1-C MSD	1.0	1.0	1.0
2:46	720-96900-E-2-A	1.0	1.0	1.0
2:47	720-96900-E-3-A	1.0	1.0	1.0
2:48	720-96901-K-1-A	1.0	1.0	1.0
2:49	720-96901-K-2-A	1.0	1.0	1.0
S1:4	CCV 6043773	1.0	1.0	1.0
S1:1	CCB 6043772	1.0	1.0	1.0
2:50	320-57757-F-2-A	1.0	1.0	1.0
2:51	320-57757-G-3-A	1.0	1.0	1.0
2:52	320-57757-G-4-A	1.0	1.0	1.0
2:53	320-57757-D-5-A	1.0	1.0	1.0
2:54	440-259119-E-1-A	1.0	1.0	1.0
2:55	440-259133-J-3-C	1.0	1.0	1.0
2:56	440-259133-J-3-D MS	1.0	1.0	1.0
2:57	440-259133-J-3-E MSD	1.0	1.0	1.0
2:58	320-57758-I-2-A	1.0	1.0	1.0
2:59	320-57758-G-5-A	1.0	1.0	1.0
S1:4	CCV 6043773	1.0	1.0	1.0
S1:1	CCB 6043772	1.0	1.0	1.0
2:60	720-96901-K-3-A	1.0	1.0	1.0
3:1	440-258685-N-1-E	1.0	1.0	1.0
3:2	440-258707-J-1-D	1.0	1.0	1.0
S1:8	xRINSE 6043786	1.0	1.0	1.0
3:3	MB 440-590693/1-A	1.0	1.0	1.0
3:4	LCS 440-590693/2-A	1.0	1.0	1.0
3:5	440-259111-E-1-A sd@5	1.0	1.0	1.0
3:6	440-259111-E-1-A	1.0	1.0	1.0
3:7	440-259111-E-1-B MS	1.0	1.0	1.0
3:8	440-259111-E-1-C MSD	1.0	1.0	1.0
S1:4	CCV 6043773	1.0	1.0	1.0

200115-3.esws

User: IRVINSTICP8

Thursday, January 16, 2020 9:08 AM

Workstation: TAIIRVICP08

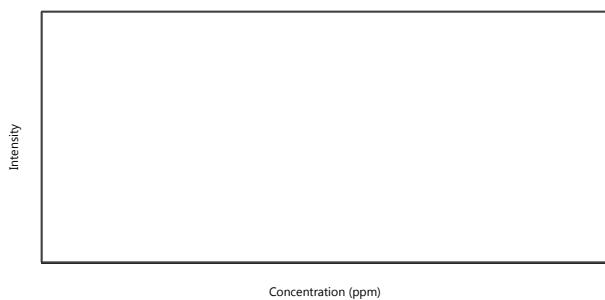
Rack:Tube	Sample Label	Weight (g)	Volume (mL)	Dilution
S1:1	CCB 6043772	1.0	1.0	1.0

Calibration Curves:

Ag (328.068 nm)

Standards	Intensity
-----------	-----------

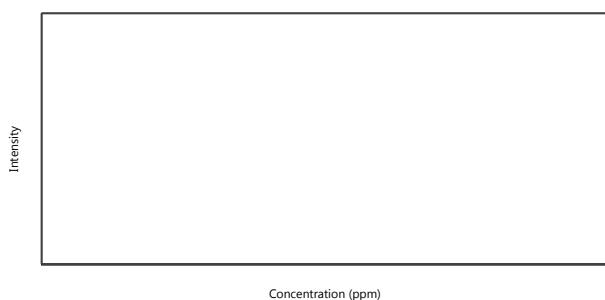
Ag (328.068 nm) Calibration



As (188.980 nm)

Standards	Intensity
-----------	-----------

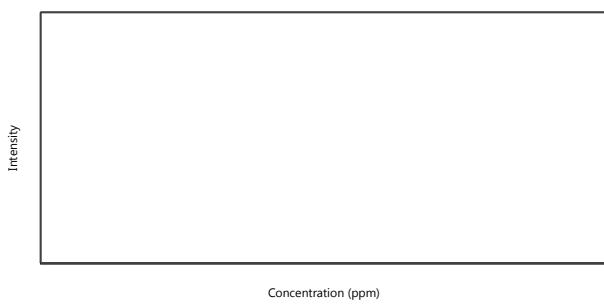
As (188.980 nm) Calibration



Ba (233.527 nm)

Standards	Intensity
-----------	-----------

Ba (233.527 nm) Calibration

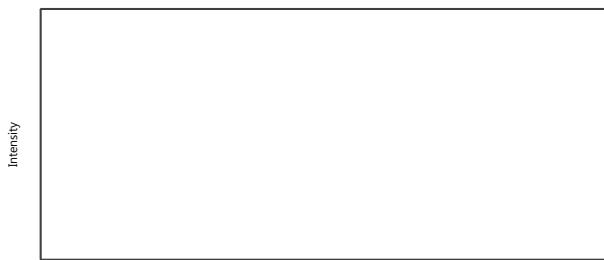


Concentration (ppm)

Cd (214.439 nm)

Standards	Intensity
-----------	-----------

Cd (214.439 nm) Calibration

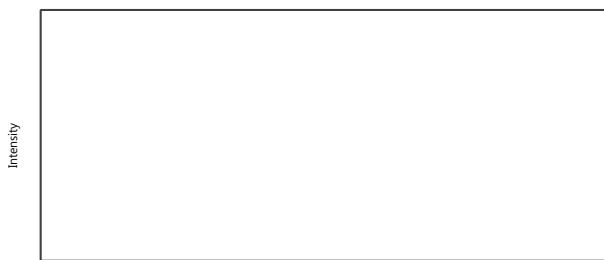


Concentration (ppm)

Co (228.615 nm)

Standards	Intensity
-----------	-----------

Co (228.615 nm) Calibration



Concentration (ppm)

Cr (205.560 nm)

Standards	Intensity
-----------	-----------

Cr (205.560 nm) Calibration



Concentration (ppm)

Cu (324.754 nm)

Standards	Intensity
-----------	-----------

Cu (324.754 nm) Calibration



Concentration (ppm)

Fe (238.204 nm)

Standards	Intensity
-----------	-----------

Fe (238.204 nm) Calibration



Concentration (ppm)

Na (589.592 nm)

Standards	Intensity
-----------	-----------

Na (589.592 nm) Calibration

Intensity



Concentration (ppm)

Ni (231.604 nm)

Standards	Intensity
-----------	-----------

Ni (231.604 nm) Calibration

Intensity



Concentration (ppm)

P (213.618 nm)

Standards	Intensity
-----------	-----------

P (213.618 nm) Calibration

Intensity



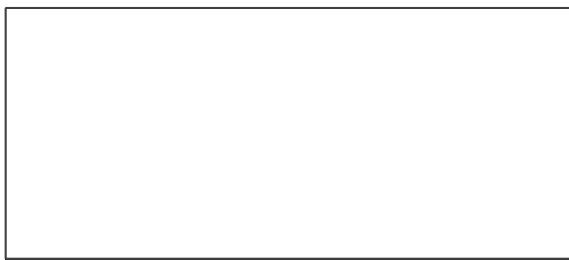
Concentration (ppm)

Pb (220.353 nm)

Standards	Intensity
-----------	-----------

Pb (220.353 nm) Calibration

Intensity



Concentration (ppm)

Sb (206.834 nm)

Standards	Intensity
-----------	-----------

Sb (206.834 nm) Calibration

Intensity



Concentration (ppm)

Se (196.026 nm)

Standards	Intensity
-----------	-----------

Intensity

Se (196.026 nm) Calibration



Concentration (ppm)

Si (251.611 nm)

Standards	Intensity
-----------	-----------

Si (251.611 nm) Calibration

Intensity



Concentration (ppm)

Sn (189.925 nm)

Standards	Intensity
-----------	-----------

Sn (189.925 nm) Calibration

Intensity



Concentration (ppm)

Sr (421.552 nm)

Standards	Intensity
-----------	-----------

Sr (421.552 nm) Calibration



Concentration (ppm)

Tl (190.794 nm)

Standards	Intensity
-----------	-----------

Tl (190.794 nm) Calibration



Concentration (ppm)

V (292.401 nm)

Standards	Intensity
-----------	-----------

V (292.401 nm) Calibration

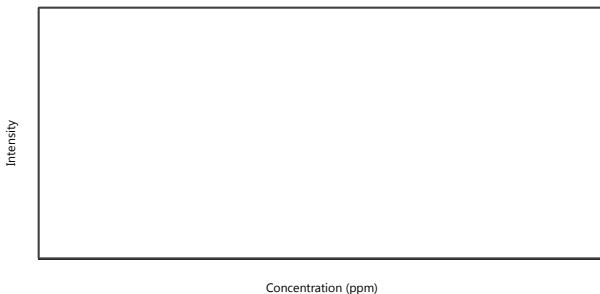


Concentration (ppm)

Zr (343.823 nm)

Standards	Intensity
-----------	-----------

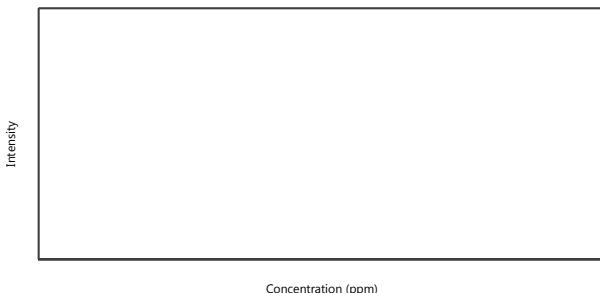
Zr (343.823 nm) Calibration



W (207.912 nm)

Standards	Intensity
-----------	-----------

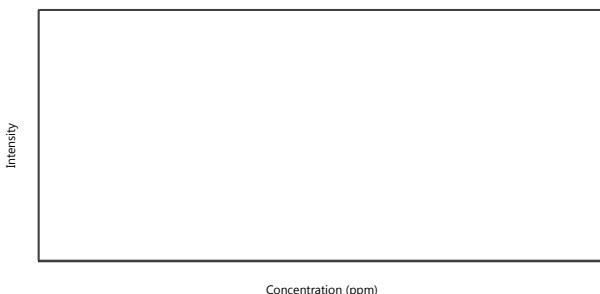
W (207.912 nm) Calibration



K (766.491 nm)

Standards	Intensity
-----------	-----------

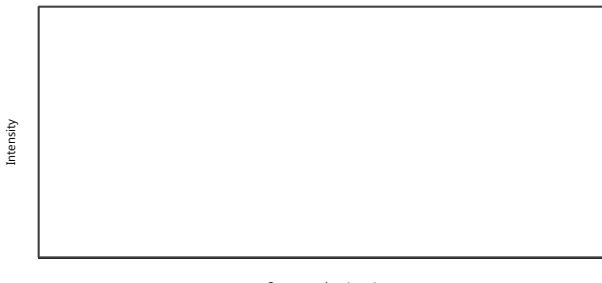
K (766.491 nm) Calibration



Mg (279.078 nm)

Standards	Intensity
-----------	-----------

Mg (279.078 nm) Calibration

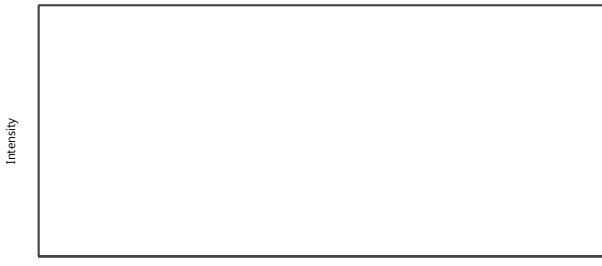


Concentration (ppm)

Al (396.152 nm)

Standards	Intensity
-----------	-----------

Al (396.152 nm) Calibration

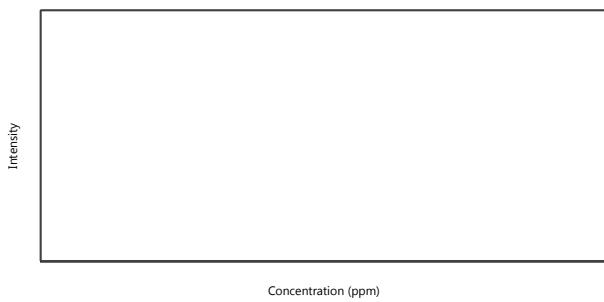


Concentration (ppm)

Li (670.783 nm)

Standards	Intensity
-----------	-----------

Li (670.783 nm) Calibration

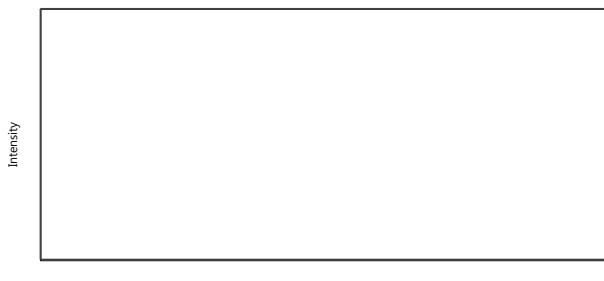


Concentration (ppm)

Be (234.861 nm)

Standards	Intensity
-----------	-----------

Be (234.861 nm) Calibration

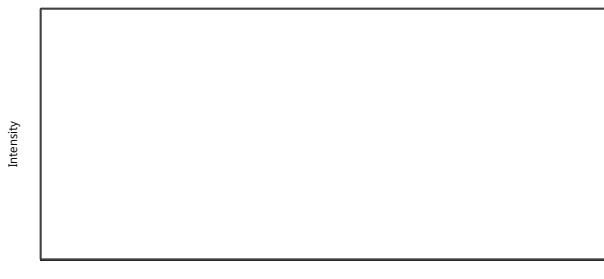


Concentration (ppm)

Ca (422.673 nm)

Standards	Intensity
-----------	-----------

Ca (422.673 nm) Calibration

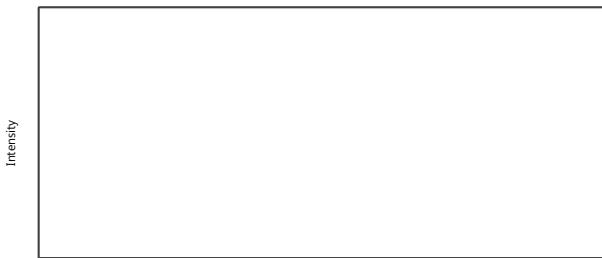


Concentration (ppm)

B (249.678 nm)

Standards	Intensity
-----------	-----------

B (249.678 nm) Calibration



Concentration (ppm)

Mn (259.372 nm)

Standards	Intensity
-----------	-----------

Mn (259.372 nm) Calibration



Concentration (ppm)

Mo (204.598 nm)

Standards	Intensity
-----------	-----------

Mo (204.598 nm) Calibration



Concentration (ppm)

Ti (336.122 nm)

Standards	Intensity
-----------	-----------

Ti (336.122 nm) Calibration

Intensity



Concentration (ppm)

Zn (202.548 nm)

Standards	Intensity
-----------	-----------

Zn (202.548 nm) Calibration

Intensity



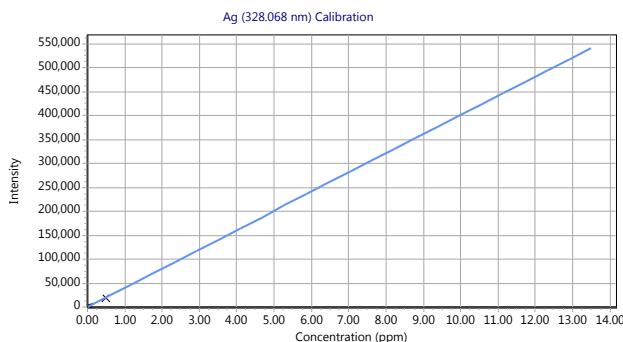
Concentration (ppm)

Ag (328.068 nm)

Intensity = 40087.18447503 \* Concentration + 46.00363025

Correlation coefficient: 1.00000

Standards	Intensity
STD0 6043772	46.0000
STD1 6043775	155.2000
STD2 6043774	2047.0000
STD3 6043773	20090.0000

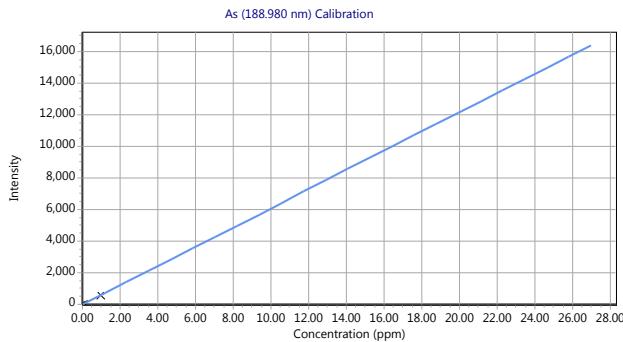


## As (188.980 nm)

Intensity =  $608.38944846 * \text{Concentration} - 1.32787427$ 

Correlation coefficient: 0.99997

Standards	Intensity
STD0 6043772	-1.3280
STD1 6043775	7.0650
STD2 6043774	60.1000
STD3 6043773	607.0000

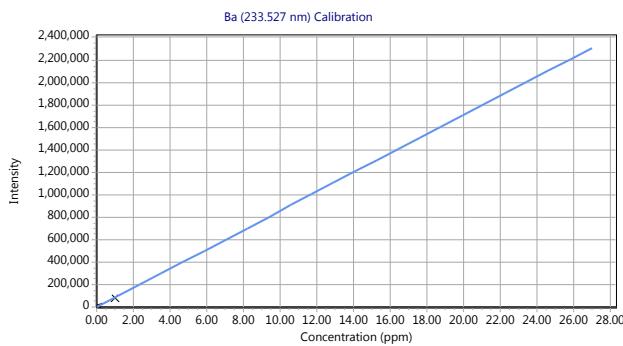


## Ba (233.527 nm)

Intensity =  $85443.92369368 * \text{Concentration} + 59.95225677$ 

Correlation coefficient: 1.00000

Standards	Intensity
STD0 6043772	59.9500
STD1 6043775	471.4000
STD2 6043774	8783.0000
STD3 6043773	85490.0000

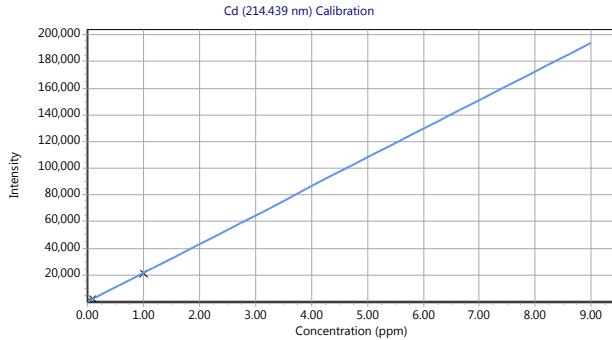


Cd (214.439 nm)

Intensity = 21592.60685850 \* Concentration - 6.41946809

Correlation coefficient: 1.00000

Standards	Intensity
STD0 6043772	-6.4190
STD1 6043775	99.4600
STD2 6043774	2200.0000
STD3 6043773	21580.0000

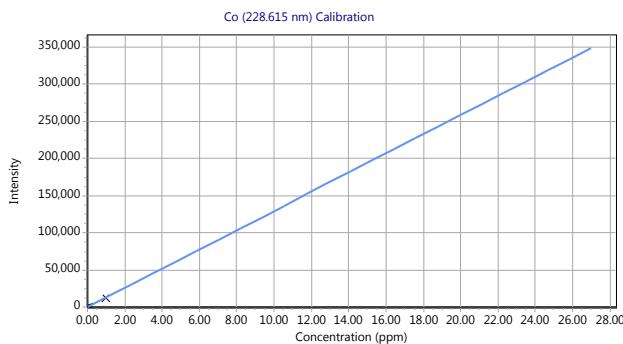


Co (228.615 nm)

Intensity = 12901.92297021 \* Concentration - 8.78714350

Correlation coefficient: 1.00000

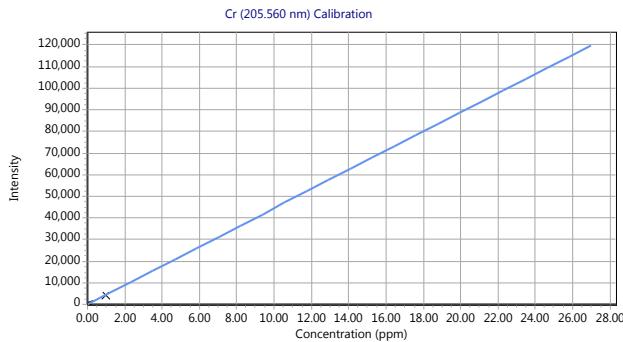
Standards	Intensity
STD0 6043772	-8.7870
STD1 6043775	60.0200
STD2 6043774	1305.0000
STD3 6043773	12890.0000



## Cr (205.560 nm)

Intensity = 4439.61033118 \* Concentration + 0.52996708  
Correlation coefficient: 1.00000

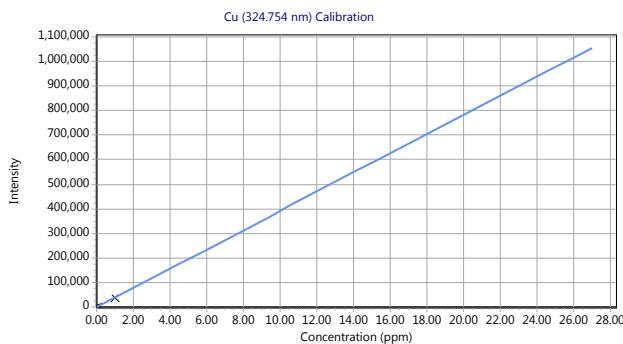
Standards	Intensity
STD0 6043772	0.5300
STD1 6043775	24.1000
STD2 6043774	449.7000
STD3 6043773	4440.0000



## Cu (324.754 nm)

Intensity = 39099.32579241 \* Concentration + 134.62846949  
Correlation coefficient: 1.00000

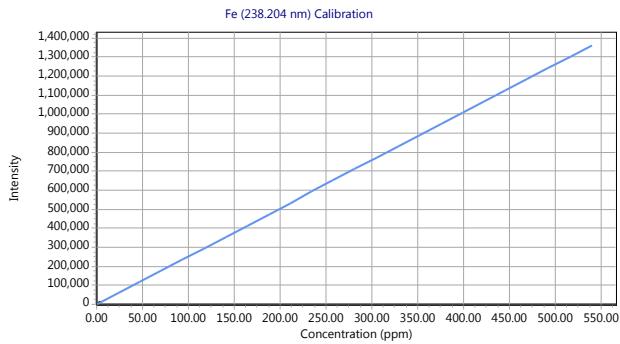
Standards	Intensity
STD0 6043772	134.6000
STD1 6043775	325.3000
STD2 6043774	4043.0000
STD3 6043773	39230.0000



Fe (238.204 nm)

Intensity = 2524.09548227 \* Concentration - 55.58502227  
Correlation coefficient: 1.00000

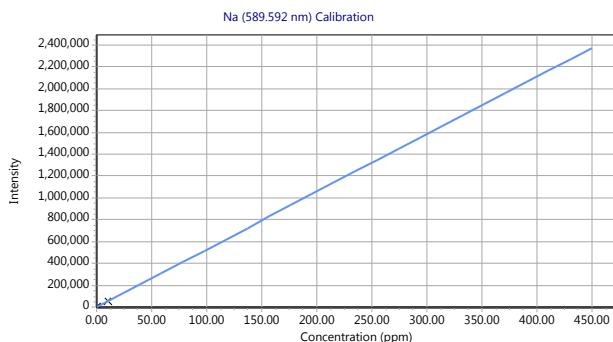
Standards	Intensity
STD0 6043772	-55.5900
STD2 6043774	192.9000
STD3 6043773	2469.0000



Na (589.592 nm)

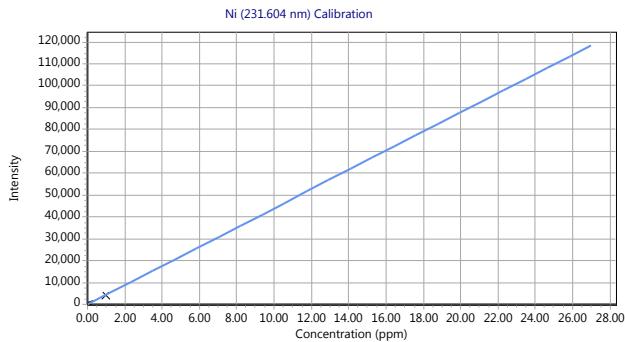
Intensity = 5272.05161739 \* Concentration + 900.96387801  
Correlation coefficient: 1.00000

Standards	Intensity
STD0 6043772	901.0000
STD2 6043774	6247.0000
STD3 6043773	53610.0000



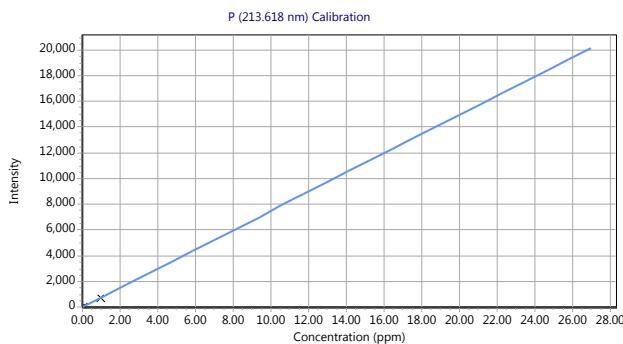
Ni (231.604 nm)  
Intensity = 4390.46946145 \* Concentration - 11.93780645  
Correlation coefficient: 1.00000

Standards	Intensity
STD0 6043772	-11.9400
STD1 6043775	6.9190
STD2 6043774	428.7000
STD3 6043773	4378.0000



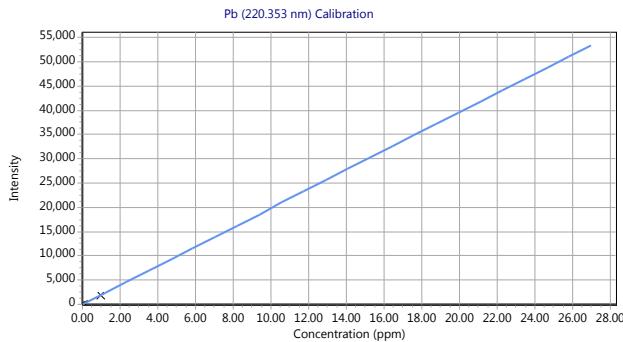
P (213.618 nm)  
Intensity = 745.89715306 \* Concentration + 4.09097412  
Correlation coefficient: 0.99999

Standards	Intensity
STD0 6043772	4.0910
STD2 6043774	74.4600
STD3 6043773	750.4000



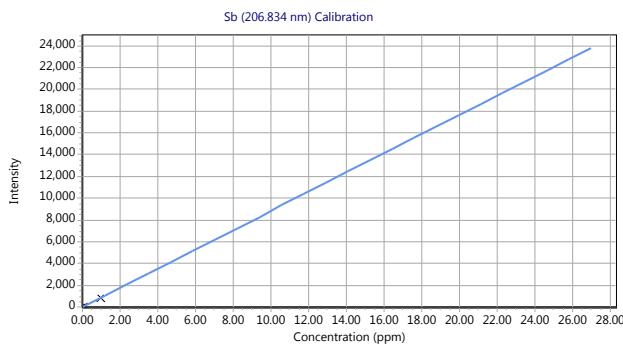
Pb (220.353 nm)  
Intensity = 1977.82623562 \* Concentration + 8.68876795  
Correlation coefficient: 1.00000

Standards	Intensity
STD0 6043772	8.6890
STD1 6043775	19.0000
STD2 6043774	211.6000
STD3 6043773	1986.0000



Sb (206.834 nm)  
Intensity = 881.77431497 \* Concentration + 2.56537125  
Correlation coefficient: 0.99991

Standards	Intensity
STD0 6043772	2.5650
STD1 6043775	5.8390
STD2 6043774	78.4700
STD3 6043773	885.6000

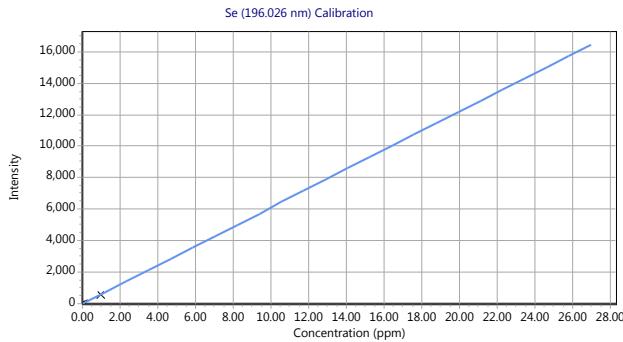


Se (196.026 nm)

Intensity = 609.36688861 \* Concentration + 1.49844578

Correlation coefficient: 1.00000

Standards	Intensity
STD0 6043772	1.4980
STD1 6043775	5.6870
STD2 6043774	62.6200
STD3 6043773	610.8000

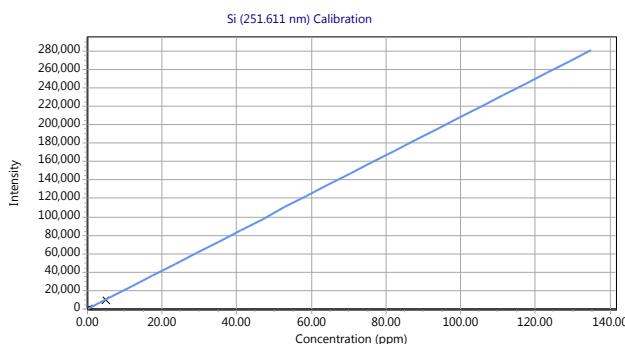


Si (251.611 nm)

Intensity = 2082.90958267 \* Concentration - 0.84444861

Correlation coefficient: 1.00000

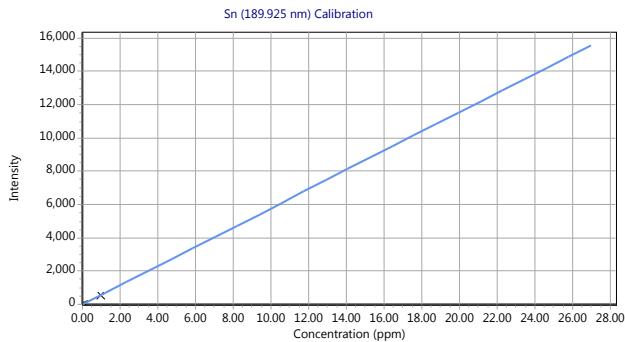
Standards	Intensity
STD0 6043772	-0.8444
STD1 6043775	47.3000
STD2 6043774	1048.0000
STD3 6043773	10410.0000



## Sn (189.925 nm)

Intensity = 576.48001373 \* Concentration - 0.34869872  
Correlation coefficient: 0.99998

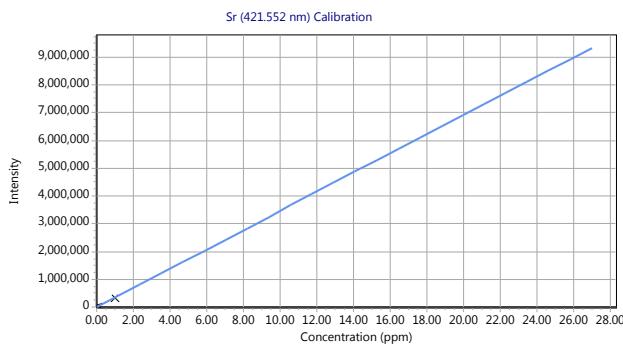
Standards	Intensity
STD0 6043772	-0.3487
STD2 6043774	53.8900
STD3 6043773	576.5000



## Sr (421.552 nm)

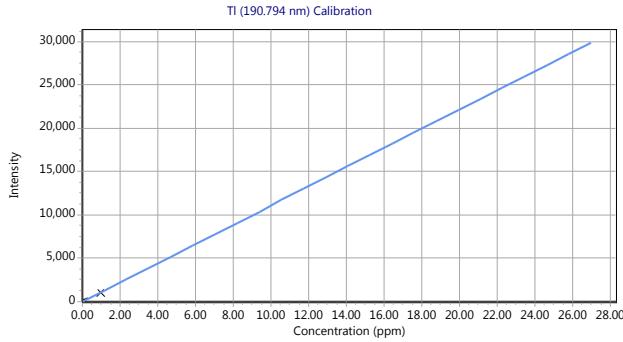
Intensity = 345801.30163320 \* Concentration - 38.16554357  
Correlation coefficient: 1.00000

Standards	Intensity
STD0 6043772	-38.1700
STD1 6043775	1714.0000
STD2 6043774	34850.0000
STD3 6043773	345700.0000



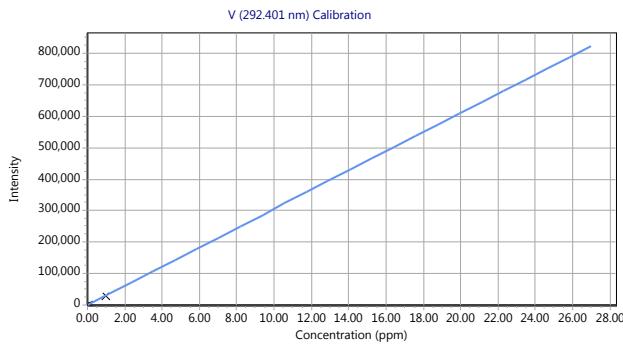
Tl (190.794 nm)  
Intensity = 1107.47134765 \* Concentration + 5.51867623  
Correlation coefficient: 0.99999

Standards	Intensity
STD0 6043772	5.5190
STD1 6043775	14.3400
STD2 6043774	120.9000
STD3 6043773	1113.0000



V (292.401 nm)  
Intensity = 30529.79861251 \* Concentration + 75.41823199  
Correlation coefficient: 1.00000

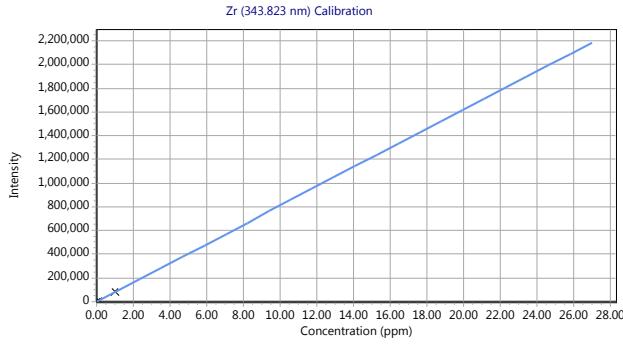
Standards	Intensity
STD0 6043772	75.4200
STD1 6043775	225.1000
STD2 6043774	3146.0000
STD3 6043773	30600.0000



## Zr (343.823 nm)

Intensity = 80905.89025254 \* Concentration + 814.54645663  
Correlation coefficient: 0.99871

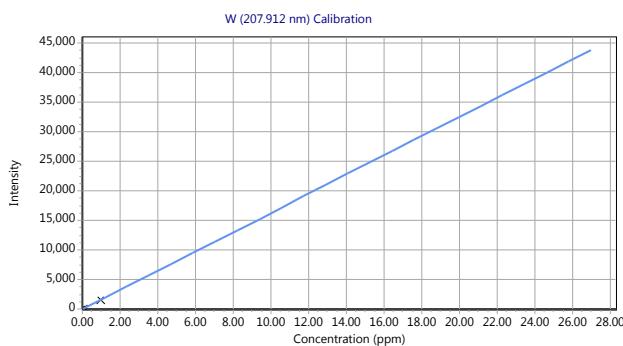
Standards	Intensity
STD0 6043772	814.5000
STD1 6043775	865.3000
STD2 6043774	4609.0000
STD3 6043773	82150.0000



## W (207.912 nm)

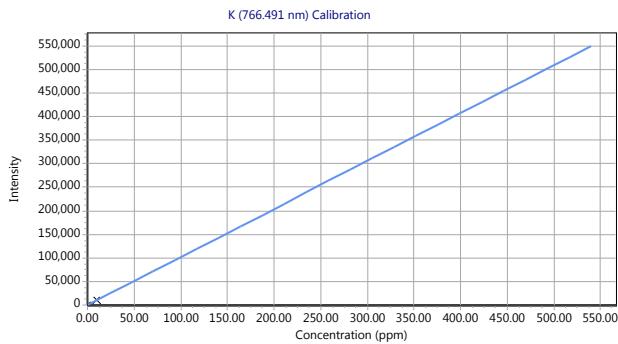
Intensity = 1626.28327099 \* Concentration - 5.82827693  
Correlation coefficient: 0.99997

Standards	Intensity
STD0 6043772	-5.8280
STD1 6043775	3.0750
STD2 6043774	144.4000
STD3 6043773	1622.0000



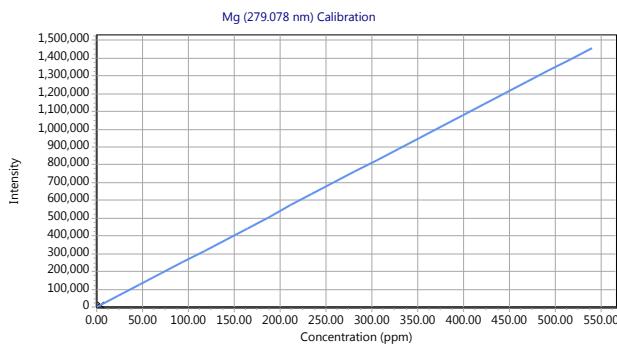
K (766.491 nm)  
Intensity = 1018.94035226 \* Concentration - 125.73279092  
Correlation coefficient: 0.99999

Standards	Intensity
STD0 6043772	-125.7000
STD2 6043774	838.7000
STD3 6043773	10070.0000



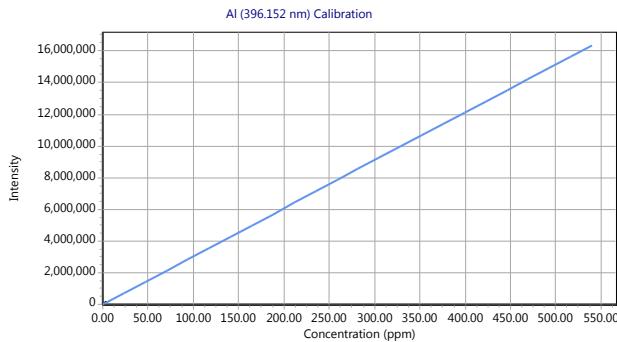
Mg (279.078 nm)  
Intensity = 2699.76492253 \* Concentration + 14.31052561  
Correlation coefficient: 1.00000

Standards	Intensity
STD0 6043772	14.3100
STD1 6043775	88.3400
STD2 6043774	1383.0000
STD3 6043773	13510.0000



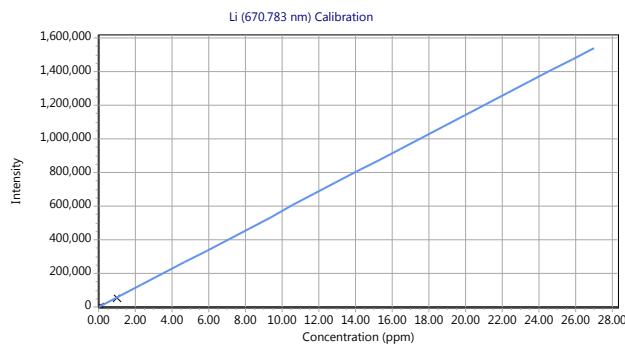
Al (396.152 nm)  
Intensity = 30309.61696793 \* Concentration - 325.38427529  
Correlation coefficient: 1.00000

Standards	Intensity
STD0 6043772	-325.4000
STD2 6043774	2654.0000
STD3 6043773	29990.0000



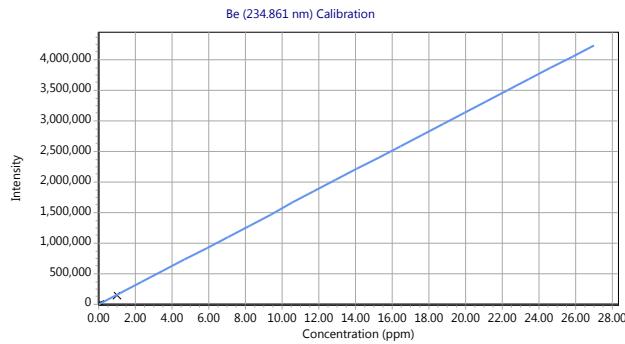
Li (670.783 nm)  
Intensity = 57159.94991243 \* Concentration + 126.78952289  
Correlation coefficient: 1.00000

Standards	Intensity
STD0 6043772	126.8000
STD2 6043774	5749.0000
STD3 6043773	57300.0000



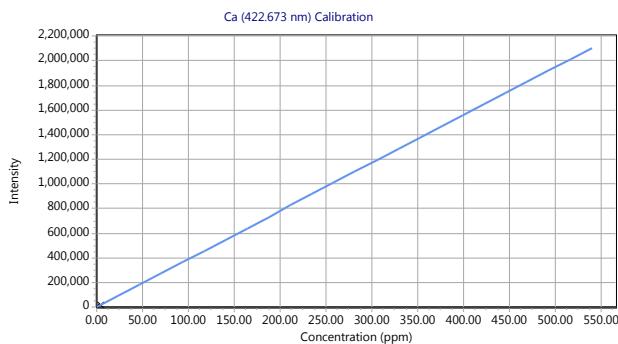
Be (234.861 nm)  
Intensity = 156873.71020910 \* Concentration + 15.00119707  
Correlation coefficient: 1.00000

Standards	Intensity
STD0 6043772	15.0000
STD1 6043775	802.2000
STD2 6043774	15730.0000
STD3 6043773	156900.0000



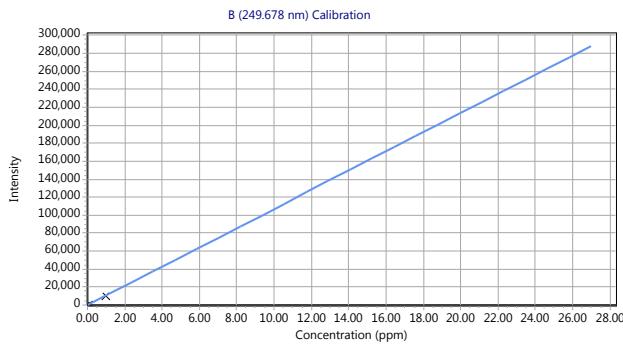
Ca (422.673 nm)  
Intensity = 3899.12946120 \* Concentration + 80.29449996  
Correlation coefficient: 1.00000

Standards	Intensity
STD0 6043772	80.2900
STD1 6043775	192.2000
STD2 6043774	2074.0000
STD3 6043773	19570.0000



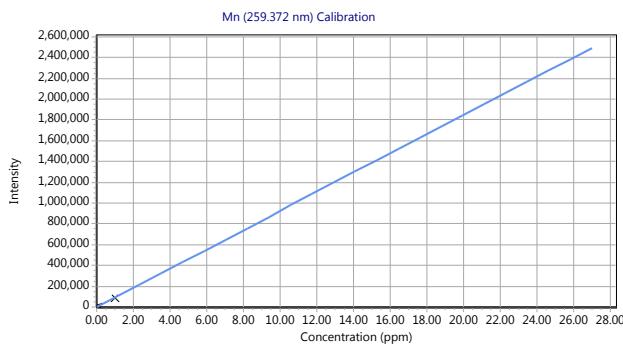
B (249.678 nm)  
 Intensity = 10680.29005961 \* Concentration - 12.56888506  
 Correlation coefficient: 1.00000

Standards	Intensity
STD0 6043772	-12.5700
STD2 6043774	1045.0000
STD3 6043773	10670.0000



Mn (259.372 nm)  
 Intensity = 92347.64759849 \* Concentration + 43.87557657  
 Correlation coefficient: 1.00000

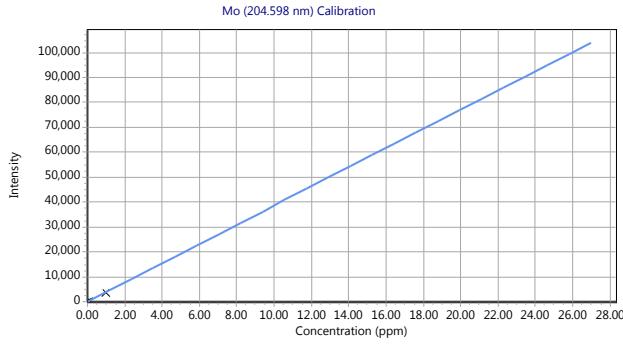
Standards	Intensity
STD0 6043772	43.8800
STD1 6043775	514.7000
STD2 6043774	9516.0000
STD3 6043773	92370.0000



## Mo (204.598 nm)

Intensity = 3852.02069709 \* Concentration - 1.72430180  
Correlation coefficient: 1.00000

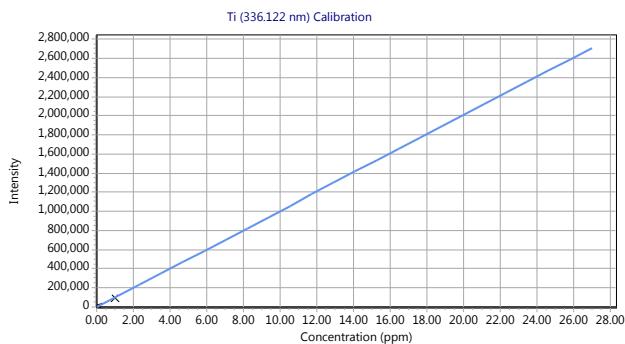
Standards	Intensity
STD0 6043772	-1.7240
STD1 6043775	19.9800
STD2 6043774	381.2000
STD3 6043773	3851.0000



## Ti (336.122 nm)

Intensity = 100401.70057575 \* Concentration - 157.71350030  
Correlation coefficient: 0.99999

Standards	Intensity
STD0 6043772	-157.7000
STD1 6043775	305.3000
STD2 6043774	9445.0000
STD3 6043773	100300.0000

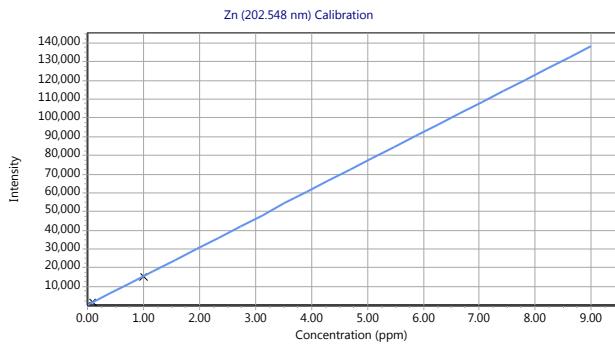


Zn (202.548 nm)

Intensity = 15393.16485437 \* Concentration + 8.77248597

Correlation coefficient: 1.00000

Standards	Intensity
STD0 6043772	8.7720
STD2 6043774	1566.0000
STD3 6043773	15400.0000



Sample Name: STD0 6043772

Date: 1/15/2020 11:50:56 AM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.0000	ppm	N/A	N/A	46.0000	0.0000 (ppm)
Al (396.152 nm)	0.0000	ppm	N/A	N/A	-325.4000	0.0000 (ppm)
As (188.980 nm)	0.0000	ppm	N/A	N/A	-1.3280	0.0000 (ppm)
B (249.678 nm)	0.0000	ppm	N/A	N/A	-12.5700	0.0000 (ppm)
Ba (233.527 nm)	0.0000	ppm	N/A	N/A	59.9500	0.0000 (ppm)
Be (234.861 nm)	0.0000	ppm	N/A	N/A	15.0000	0.0000 (ppm)
Ca (422.673 nm)	0.0000	ppm	N/A	N/A	80.2900	0.0000 (ppm)
Cd (214.439 nm)	0.0000	ppm	N/A	N/A	-6.4190	0.0000 (ppm)
Co (228.615 nm)	0.0000	ppm	N/A	N/A	-8.7870	0.0000 (ppm)
Cr (205.560 nm)	0.0000	ppm	N/A	N/A	0.5300	0.0000 (ppm)
Cu (324.754 nm)	0.0000	ppm	N/A	N/A	134.6000	0.0000 (ppm)
Fe (238.204 nm)	0.0000	ppm	N/A	N/A	-55.5900	0.0000 (ppm)
K (766.491 nm)	0.0000	ppm	N/A	N/A	-125.7000	0.0000 (ppm)
Li (670.783 nm)	0.0000	ppm	N/A	N/A	126.8000	0.0000 (ppm)
Mg (279.078 nm)	0.0000	ppm	N/A	N/A	14.3100	0.0000 (ppm)
Mn (259.372 nm)	0.0000	ppm	N/A	N/A	43.8800	0.0000 (ppm)
Mo (204.598 nm)	0.0000	ppm	N/A	N/A	-1.7240	0.0000 (ppm)
Na (589.592 nm)	0.0000	ppm	N/A	N/A	901.0000	0.0000 (ppm)
Ni (231.604 nm)	0.0000	ppm	N/A	N/A	-11.9400	0.0000 (ppm)
P (213.618 nm)	0.0000	ppm	N/A	N/A	4.0910	0.0000 (ppm)
Pb (220.353 nm)	0.0000	ppm	N/A	N/A	8.6890	0.0000 (ppm)
Sb (206.834 nm)	0.0000	ppm	N/A	N/A	2.5650	0.0000 (ppm)
Se (196.026 nm)	0.0000	ppm	N/A	N/A	1.4980	0.0000 (ppm)
Si (251.611 nm)	0.0000	ppm	N/A	N/A	-0.8444	0.0000 (ppm)
Sn (189.925 nm)	0.0000	ppm	N/A	N/A	-0.3487	0.0000 (ppm)
Sr (421.552 nm)	0.0000	ppm	N/A	N/A	-38.1700	0.0000 (ppm)
Ti (336.122 nm)	0.0000	ppm	N/A	N/A	-157.7000	0.0000 (ppm)
Tl (190.794 nm)	0.0000	ppm	N/A	N/A	5.5190	0.0000 (ppm)
V (292.401 nm)	0.0000	ppm	N/A	N/A	75.4200	0.0000 (ppm)
W (207.912 nm)	0.0000	ppm	N/A	N/A	-5.8280	0.0000 (ppm)
Zn (202.548 nm)	0.0000	ppm	N/A	N/A	8.7720	0.0000 (ppm)
Zr (343.823 nm)	0.0000	ppm	N/A	N/A	814.5000	0.0000 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	1.0000	378500.0000	0.0000	0.00
Y_R 371.029	1.0000	50720.0000	0.0000	0.00

Sample Name: STD1 6043775

Date: 1/15/2020 11:53:08 AM

Rack:Tube: S1:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.0025	ppm	N/A	N/A	155.2000	0.0025 (ppm)
Al (396.152 nm)		ppm	N/A	N/A	-160.1000	
As (188.980 nm)	0.0050	ppm	N/A	N/A	7.0650	0.0050 (ppm)
B (249.678 nm)		ppm	N/A	N/A	46.1800	
Ba (233.527 nm)	0.0050	ppm	N/A	N/A	471.4000	0.0050 (ppm)
Be (234.861 nm)	0.0050	ppm	N/A	N/A	802.2000	0.0050 (ppm)
Ca (422.673 nm)	0.0250	ppm	N/A	N/A	192.2000	0.0250 (ppm)
Cd (214.439 nm)	0.0050	ppm	N/A	N/A	99.4600	0.0050 (ppm)
Co (228.615 nm)	0.0050	ppm	N/A	N/A	60.0200	0.0050 (ppm)
Cr (205.560 nm)	0.0050	ppm	N/A	N/A	24.1000	0.0050 (ppm)
Cu (324.754 nm)	0.0050	ppm	N/A	N/A	325.3000	0.0050 (ppm)
Fe (238.204 nm)		ppm	N/A	N/A	-62.4100	
K (766.491 nm)		ppm	N/A	N/A	-39.4800	
Li (670.783 nm)		ppm	N/A	N/A	327.7000	
Mg (279.078 nm)	0.0250	ppm	N/A	N/A	88.3400	0.0250 (ppm)
Mn (259.372 nm)	0.0050	ppm	N/A	N/A	514.7000	0.0050 (ppm)
Mo (204.598 nm)	0.0050	ppm	N/A	N/A	19.9800	0.0050 (ppm)
Na (589.592 nm)		ppm	N/A	N/A	1175.0000	
Ni (231.604 nm)	0.0050	ppm	N/A	N/A	6.9190	0.0050 (ppm)
P (213.618 nm)		ppm	N/A	N/A	5.1440	
Pb (220.353 nm)	0.0050	ppm	N/A	N/A	19.0000	0.0050 (ppm)
Sb (206.834 nm)	0.0050	ppm	N/A	N/A	5.8390	0.0050 (ppm)
Se (196.026 nm)	0.0050	ppm	N/A	N/A	5.6870	0.0050 (ppm)
Si (251.611 nm)	0.0250	ppm	N/A	N/A	47.3000	0.0250 (ppm)
Sn (189.925 nm)		ppm	N/A	N/A	1.8010	
Sr (421.552 nm)	0.0050	ppm	N/A	N/A	1714.0000	0.0050 (ppm)
Ti (336.122 nm)	0.0050	ppm	N/A	N/A	305.3000	0.0050 (ppm)
Tl (190.794 nm)	0.0050	ppm	N/A	N/A	14.3400	0.0050 (ppm)
V (292.401 nm)	0.0050	ppm	N/A	N/A	225.1000	0.0050 (ppm)
W (207.912 nm)	0.0050	ppm	N/A	N/A	3.0750	0.0050 (ppm)
Zn (202.548 nm)		ppm	N/A	N/A	89.9700	
Zr (343.823 nm)	0.0050	ppm	N/A	N/A	865.3000	0.0050 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9978	377700.0000	0.0008	0.08
Y_R 371.029	1.0050	50980.0000	0.0089	0.88

Sample Name: STD2 6043774

Date: 1/15/2020 11:58:16 AM

Rack:Tube: S1:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.0500	ppm	N/A	N/A	2047.0000	0.0500 (ppm)
Al (396.152 nm)	0.1000	ppm	N/A	N/A	2654.0000	0.1000 (ppm)
As (188.980 nm)	0.1000	ppm	N/A	N/A	60.1000	0.1000 (ppm)
B (249.678 nm)	0.1000	ppm	N/A	N/A	1045.0000	0.1000 (ppm)
Ba (233.527 nm)	0.1000	ppm	N/A	N/A	8783.0000	0.1000 (ppm)
Be (234.861 nm)	0.1000	ppm	N/A	N/A	15730.0000	0.1000 (ppm)
Ca (422.673 nm)	0.5000	ppm	N/A	N/A	2074.0000	0.5000 (ppm)
Cd (214.439 nm)	0.1000	ppm	N/A	N/A	2200.0000	0.1000 (ppm)
Co (228.615 nm)	0.1000	ppm	N/A	N/A	1305.0000	0.1000 (ppm)
Cr (205.560 nm)	0.1000	ppm	N/A	N/A	449.7000	0.1000 (ppm)
Cu (324.754 nm)	0.1000	ppm	N/A	N/A	4043.0000	0.1000 (ppm)
Fe (238.204 nm)	0.1000	ppm	N/A	N/A	192.9000	0.1000 (ppm)
K (766.491 nm)	1.0000	ppm	N/A	N/A	838.7000	1.0000 (ppm)
Li (670.783 nm)	0.1000	ppm	N/A	N/A	5749.0000	0.1000 (ppm)
Mg (279.078 nm)	0.5000	ppm	N/A	N/A	1383.0000	0.5000 (ppm)
Mn (259.372 nm)	0.1000	ppm	N/A	N/A	9516.0000	0.1000 (ppm)
Mo (204.598 nm)	0.1000	ppm	N/A	N/A	381.2000	0.1000 (ppm)
Na (589.592 nm)	1.0000	ppm	N/A	N/A	6247.0000	1.0000 (ppm)
Ni (231.604 nm)	0.1000	ppm	N/A	N/A	428.7000	0.1000 (ppm)
P (213.618 nm)	0.1000	ppm	N/A	N/A	74.4600	0.1000 (ppm)
Pb (220.353 nm)	0.1000	ppm	N/A	N/A	211.6000	0.1000 (ppm)
Sb (206.834 nm)	0.1000	ppm	N/A	N/A	78.4700	0.1000 (ppm)
Se (196.026 nm)	0.1000	ppm	N/A	N/A	62.6200	0.1000 (ppm)
Si (251.611 nm)	0.5000	ppm	N/A	N/A	1048.0000	0.5000 (ppm)
Sn (189.925 nm)	0.1000	ppm	N/A	N/A	53.8900	0.1000 (ppm)
Sr (421.552 nm)	0.1000	ppm	N/A	N/A	34850.0000	0.1000 (ppm)
Ti (336.122 nm)	0.1000	ppm	N/A	N/A	9445.0000	0.1000 (ppm)
Tl (190.794 nm)	0.1000	ppm	N/A	N/A	120.9000	0.1000 (ppm)
V (292.401 nm)	0.1000	ppm	N/A	N/A	3146.0000	0.1000 (ppm)
W (207.912 nm)	0.1000	ppm	N/A	N/A	144.4000	0.1000 (ppm)
Zn (202.548 nm)	0.1000	ppm	N/A	N/A	1566.0000	0.1000 (ppm)
Zr (343.823 nm)	0.1000	ppm	N/A	N/A	4609.0000	0.1000 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	1.0030	379500.0000	0.0030	0.30
Y_R 371.029	1.0120	51350.0000	0.0063	0.62

Sample Name: STD3 6043773

Date: 1/15/2020 12:00:28 PM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

**Analyte Results**

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.5000	ppm	N/A	N/A	20090.0000	0.5000 (ppm)
Al (396.152 nm)	1.0000	ppm	N/A	N/A	29990.0000	1.0000 (ppm)
As (188.980 nm)	1.0000	ppm	N/A	N/A	607.0000	1.0000 (ppm)
B (249.678 nm)	1.0000	ppm	N/A	N/A	10670.0000	1.0000 (ppm)
Ba (233.527 nm)	1.0000	ppm	N/A	N/A	85490.0000	1.0000 (ppm)
Be (234.861 nm)	1.0000	ppm	N/A	N/A	156900.0000	1.0000 (ppm)
Ca (422.673 nm)	5.0000	ppm	N/A	N/A	19570.0000	5.0000 (ppm)
Cd (214.439 nm)	1.0000	ppm	N/A	N/A	21580.0000	1.0000 (ppm)
Co (228.615 nm)	1.0000	ppm	N/A	N/A	12890.0000	1.0000 (ppm)
Cr (205.560 nm)	1.0000	ppm	N/A	N/A	4440.0000	1.0000 (ppm)
Cu (324.754 nm)	1.0000	ppm	N/A	N/A	39230.0000	1.0000 (ppm)
Fe (238.204 nm)	1.0000	ppm	N/A	N/A	2469.0000	1.0000 (ppm)
K (766.491 nm)	10.0000	ppm	N/A	N/A	10070.0000	10.0000 (ppm)
Li (670.783 nm)	1.0000	ppm	N/A	N/A	57300.0000	1.0000 (ppm)
Mg (279.078 nm)	5.0000	ppm	N/A	N/A	13510.0000	5.0000 (ppm)
Mn (259.372 nm)	1.0000	ppm	N/A	N/A	92370.0000	1.0000 (ppm)
Mo (204.598 nm)	1.0000	ppm	N/A	N/A	3851.0000	1.0000 (ppm)
Na (589.592 nm)	10.0000	ppm	N/A	N/A	53610.0000	10.0000 (ppm)
Ni (231.604 nm)	1.0000	ppm	N/A	N/A	4378.0000	1.0000 (ppm)
P (213.618 nm)	1.0000	ppm	N/A	N/A	750.4000	1.0000 (ppm)
Pb (220.353 nm)	1.0000	ppm	N/A	N/A	1986.0000	1.0000 (ppm)
Sb (206.834 nm)	1.0000	ppm	N/A	N/A	885.6000	1.0000 (ppm)
Se (196.026 nm)	1.0000	ppm	N/A	N/A	610.8000	1.0000 (ppm)
Si (251.611 nm)	5.0000	ppm	N/A	N/A	10410.0000	5.0000 (ppm)
Sn (189.925 nm)	1.0000	ppm	N/A	N/A	576.5000	1.0000 (ppm)
Sr (421.552 nm)	1.0000	ppm	N/A	N/A	345700.0000	1.0000 (ppm)
Ti (336.122 nm)	1.0000	ppm	N/A	N/A	100300.0000	1.0000 (ppm)
Tl (190.794 nm)	1.0000	ppm	N/A	N/A	1113.0000	1.0000 (ppm)
V (292.401 nm)	1.0000	ppm	N/A	N/A	30600.0000	1.0000 (ppm)
W (207.912 nm)	1.0000	ppm	N/A	N/A	1622.0000	1.0000 (ppm)
Zn (202.548 nm)	1.0000	ppm	N/A	N/A	15400.0000	1.0000 (ppm)
Zr (343.823 nm)	1.0000	ppm	N/A	N/A	82150.0000	1.0000 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9889	374300.0000	0.0045	0.46
Y_R 371.029	1.0050	50970.0000	0.0067	0.66

Sample Name: ICV 6043780

Date: 1/15/2020 12:10:41 PM

Rack:Tube: S1:5

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.9819	ppm	0.0040	0.41	39500.0000	0.9819 (ppm)
Al (396.152 nm)	0.9882	ppm	0.0048	0.49	30740.0000	0.9882 (ppm)
As (188.980 nm)	1.9710	ppm	0.0049	0.25	1191.0000	1.9710 (ppm)
B (249.678 nm)	1.0020	ppm	0.0044	0.44	10600.0000	1.0020 (ppm)
Ba (233.527 nm)	1.9750	ppm	0.0231	1.17	168800.0000	1.9750 (ppm)
Be (234.861 nm)	0.9938	ppm	0.0048	0.48	155900.0000	0.9938 (ppm)
Ca (422.673 nm)	4.9960	ppm	0.0245	0.49	19560.0000	4.9960 (ppm)
Cd (214.439 nm)	0.9961	ppm	0.0036	0.36	21500.0000	0.9961 (ppm)
Co (228.615 nm)	0.9960	ppm	0.0054	0.55	12870.0000	0.9960 (ppm)
Cr (205.560 nm)	0.9929	ppm	0.0054	0.54	4407.0000	0.9929 (ppm)
Cu (324.754 nm)	0.9865	ppm	0.0041	0.42	38720.0000	0.9865 (ppm)
Fe (238.204 nm)	1.0100	ppm	0.0120	1.18	2493.0000	1.0100 (ppm)
K (766.491 nm)	5.0550	ppm	0.0233	0.46	5037.0000	5.0550 (ppm)
Li (670.783 nm)	0.9938	ppm	0.0055	0.55	56530.0000	0.9938 (ppm)
Mg (279.078 nm)	5.0220	ppm	0.0572	1.14	13570.0000	5.0220 (ppm)
Mn (259.372 nm)	1.0020	ppm	0.0041	0.41	93110.0000	1.0020 (ppm)
Mo (204.598 nm)	1.0050	ppm	0.0043	0.43	3871.0000	1.0050 (ppm)
Na (589.592 nm)	5.1150	ppm	0.0320	0.63	27930.0000	5.1150 (ppm)
Ni (231.604 nm)	0.9976	ppm	0.0041	0.41	4365.0000	0.9976 (ppm)
P (213.618 nm)	2.0660	ppm	0.0076	0.37	1501.0000	2.0660 (ppm)
Pb (220.353 nm)	0.9972	ppm	0.0044	0.44	1977.0000	0.9972 (ppm)
Sb (206.834 nm)	0.9974	ppm	0.0338	3.39	874.8000	0.9974 (ppm)
Se (196.026 nm)	1.9780	ppm	0.0136	0.69	1211.0000	1.9780 (ppm)
Si (251.611 nm)	1.9810	ppm	0.0311	1.57	4288.0000	1.9810 (ppm)
Sn (189.925 nm)	1.9580	ppm	0.0051	0.26	1129.0000	1.9580 (ppm)
Sr (421.552 nm)	0.9909	ppm	0.0055	0.56	342700.0000	0.9909 (ppm)
Ti (336.122 nm)	0.9907	ppm	0.0084	0.85	99300.0000	0.9907 (ppm)
Tl (190.794 nm)	2.0060	ppm	0.0189	0.94	2197.0000	2.0060 (ppm)
V (292.401 nm)	0.9947	ppm	0.0066	0.66	30230.0000	0.9947 (ppm)
W (207.912 nm)	0.9739	ppm	0.0015	0.16	1591.0000	0.9739 (ppm)
Zn (202.548 nm)	1.0060	ppm	0.0045	0.45	15590.0000	1.0060 (ppm)
Zr (343.823 nm)	1.0200	ppm	0.0140	1.38	83300.0000	1.0200 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9962	377100.0000	0.0059	0.59
Y_R 371.029	1.0130	51400.0000	0.0098	0.96

Sample Name: ICV 6043780

Date: 1/15/2020 12:15:19 PM

Rack:Tube: S1:5

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.9688	ppm	0.0010	0.10	38980.0000	0.9688 (ppm)
Al (396.152 nm)	0.9845	ppm	0.0023	0.23	30630.0000	0.9845 (ppm)
As (188.980 nm)	1.9610	ppm	0.0014	0.07	1184.0000	1.9610 (ppm)
B (249.678 nm)	0.9972	ppm	0.0003	0.03	10550.0000	0.9972 (ppm)
Ba (233.527 nm)	1.9740	ppm	0.0024	0.12	168700.0000	1.9740 (ppm)
Be (234.861 nm)	0.9890	ppm	0.0016	0.16	155200.0000	0.9890 (ppm)
Ca (422.673 nm)	5.0110	ppm	0.0157	0.31	19620.0000	5.0110 (ppm)
Cd (214.439 nm)	0.9915	ppm	0.0002	0.02	21400.0000	0.9915 (ppm)
Co (228.615 nm)	0.9919	ppm	0.0015	0.15	12820.0000	0.9919 (ppm)
Cr (205.560 nm)	0.9853	ppm	0.0006	0.06	4373.0000	0.9853 (ppm)
Cu (324.754 nm)	0.9816	ppm	0.0004	0.04	38530.0000	0.9816 (ppm)
Fe (238.204 nm)	1.0110	ppm	0.0042	0.42	2494.0000	1.0110 (ppm)
K (766.491 nm)	5.0330	ppm	0.0372	0.74	5015.0000	5.0330 (ppm)
Li (670.783 nm)	0.9946	ppm	0.0023	0.23	56580.0000	0.9946 (ppm)
Mg (279.078 nm)	5.0100	ppm	0.0101	0.20	13540.0000	5.0100 (ppm)
Mn (259.372 nm)	0.9960	ppm	0.0018	0.18	92600.0000	0.9960 (ppm)
Mo (204.598 nm)	1.0020	ppm	0.0044	0.44	3860.0000	1.0020 (ppm)
Na (589.592 nm)	5.0990	ppm	0.0171	0.34	27850.0000	5.0990 (ppm)
Ni (231.604 nm)	0.9899	ppm	0.0033	0.33	4331.0000	0.9899 (ppm)
P (213.618 nm)	2.0640	ppm	0.0068	0.33	1500.0000	2.0640 (ppm)
Pb (220.353 nm)	0.9915	ppm	0.0028	0.28	1966.0000	0.9915 (ppm)
Sb (206.834 nm)	0.9921	ppm	0.0353	3.55	870.0000	0.9921 (ppm)
Se (196.026 nm)	1.9800	ppm	0.0030	0.15	1212.0000	1.9800 (ppm)
Si (251.611 nm)	1.9760	ppm	0.0221	1.12	4277.0000	1.9760 (ppm)
Sn (189.925 nm)	1.9610	ppm	0.0018	0.09	1130.0000	1.9610 (ppm)
Sr (421.552 nm)	0.9914	ppm	0.0006	0.06	342800.0000	0.9914 (ppm)
Ti (336.122 nm)	0.9918	ppm	0.0048	0.48	99410.0000	0.9918 (ppm)
Tl (190.794 nm)	1.9910	ppm	0.0151	0.76	2181.0000	1.9910 (ppm)
V (292.401 nm)	0.9897	ppm	0.0015	0.15	30080.0000	0.9897 (ppm)
W (207.912 nm)	0.9703	ppm	0.0007	0.07	1585.0000	0.9703 (ppm)
Zn (202.548 nm)	0.9999	ppm	0.0016	0.16	15500.0000	0.9999 (ppm)
Zr (343.823 nm)	1.0320	ppm	0.0060	0.58	84280.0000	1.0320 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9989	378100.0000	0.0029	0.29
Y_R 371.029	1.0120	51350.0000	0.0000	0.00

Sample Name: IPC 6043780

Date: 1/15/2020 12:17:31 PM

Rack:Tube: S1:5

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.9729	ppm	0.0037	0.38	39140.0000	0.9729 (ppm)
Al (396.152 nm)	0.9847	ppm	0.0034	0.34	30640.0000	0.9847 (ppm)
As (188.980 nm)	1.9670	ppm	0.0078	0.40	1188.0000	1.9670 (ppm)
B (249.678 nm)	0.9994	ppm	0.0025	0.25	10570.0000	0.9994 (ppm)
Ba (233.527 nm)	1.9780	ppm	0.0085	0.43	169100.0000	1.9780 (ppm)
Be (234.861 nm)	0.9910	ppm	0.0037	0.37	155500.0000	0.9910 (ppm)
Ca (422.673 nm)	5.0180	ppm	0.0319	0.64	19650.0000	5.0180 (ppm)
Cd (214.439 nm)	0.9921	ppm	0.0044	0.44	21410.0000	0.9921 (ppm)
Co (228.615 nm)	0.9920	ppm	0.0032	0.33	12820.0000	0.9920 (ppm)
Cr (205.560 nm)	0.9906	ppm	0.0059	0.60	4397.0000	0.9906 (ppm)
Cu (324.754 nm)	0.9832	ppm	0.0029	0.29	38590.0000	0.9832 (ppm)
Fe (238.204 nm)	1.0150	ppm	0.0014	0.14	2503.0000	1.0150 (ppm)
K (766.491 nm)	4.9840	ppm	0.0160	0.32	4965.0000	4.9840 (ppm)
Li (670.783 nm)	0.9962	ppm	0.0000	0.00	56670.0000	0.9962 (ppm)
Mg (279.078 nm)	5.0260	ppm	0.0220	0.44	13580.0000	5.0260 (ppm)
Mn (259.372 nm)	0.9978	ppm	0.0039	0.39	92770.0000	0.9978 (ppm)
Mo (204.598 nm)	1.0120	ppm	0.0050	0.50	3896.0000	1.0120 (ppm)
Na (589.592 nm)	5.1160	ppm	0.0028	0.05	27940.0000	5.1160 (ppm)
Ni (231.604 nm)	0.9935	ppm	0.0021	0.22	4347.0000	0.9935 (ppm)
P (213.618 nm)	2.0570	ppm	0.0131	0.64	1495.0000	2.0570 (ppm)
Pb (220.353 nm)	0.9891	ppm	0.0043	0.43	1961.0000	0.9891 (ppm)
Sb (206.834 nm)	0.9921	ppm	0.0260	2.62	870.0000	0.9921 (ppm)
Se (196.026 nm)	1.9740	ppm	0.0090	0.46	1209.0000	1.9740 (ppm)
Si (251.611 nm)	1.9740	ppm	0.0287	1.45	4275.0000	1.9740 (ppm)
Sn (189.925 nm)	1.9750	ppm	0.0086	0.43	1139.0000	1.9750 (ppm)
Sr (421.552 nm)	0.9952	ppm	0.0039	0.39	344200.0000	0.9952 (ppm)
Ti (336.122 nm)	1.0020	ppm	0.0065	0.65	100400.0000	1.0020 (ppm)
Tl (190.794 nm)	1.9920	ppm	0.0166	0.84	2182.0000	1.9920 (ppm)
V (292.401 nm)	0.9904	ppm	0.0043	0.43	30100.0000	0.9904 (ppm)
W (207.912 nm)	0.9823	ppm	0.0049	0.50	1605.0000	0.9823 (ppm)
Zn (202.548 nm)	0.9994	ppm	0.0052	0.52	15500.0000	0.9994 (ppm)
Zr (343.823 nm)	1.0300	ppm	0.0066	0.64	84150.0000	1.0300 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9950	376600.0000	0.0047	0.47
Y_R 371.029	1.0070	51090.0000	0.0051	0.51

Sample Name: ICV2 6043787

Date: 1/15/2020 12:19:43 PM

Rack:Tube: S1:11

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.0009	ppm	0.0008	89.76	83.1300	0.0009 (ppm)
Al (396.152 nm)	0.0018	ppm	0.0004	19.29	-258.9000	0.0018 (ppm)
As (188.980 nm)	0.0095	ppm	0.0045	47.46	4.4440	0.0095 (ppm)
B (249.678 nm)	0.0017	ppm	0.0001	6.78	4.1950	0.0017 (ppm)
Ba (233.527 nm)	0.0010	ppm	0.0004	37.47	149.2000	0.0010 (ppm)
Be (234.861 nm)	0.0006	ppm	0.0001	18.31	104.5000	0.0006 (ppm)
Ca (422.673 nm)	-0.0014 u	ppm	0.0160	> 100.00	74.9800	-0.0014 u (ppm)
Cd (214.439 nm)	0.0003	ppm	0.0003	> 100.00	-0.0077	0.0003 (ppm)
Co (228.615 nm)	0.0004	ppm	0.0002	35.62	-3.1640	0.0004 (ppm)
Cr (205.560 nm)	0.0003 u	ppm	0.0006	> 100.00	1.9740	0.0003 u (ppm)
Cu (324.754 nm)	0.0009	ppm	0.0003	32.22	169.4000	0.0009 (ppm)
Fe (238.204 nm)	0.0070	ppm	0.0003	4.12	-38.0200	0.0070 (ppm)
K (766.491 nm)	0.0297	ppm	0.0051	17.01	-95.4500	0.0297 (ppm)
Li (670.783 nm)	-0.0015 u	ppm	0.0004	27.78	42.1400	-0.0015 u (ppm)
Mg (279.078 nm)	0.0024	ppm	0.0007	27.72	20.8300	0.0024 (ppm)
Mn (259.372 nm)	0.0006	ppm	0.0001	18.66	106.9000	0.0006 (ppm)
Mo (204.598 nm)	0.0135	ppm	0.0026	19.31	50.1100	0.0135 (ppm)
Na (589.592 nm)	4.9400	ppm	0.0128	0.26	26950.0000	4.9400 (ppm)
Ni (231.604 nm)	0.0015	ppm	0.0004	23.10	-5.2320	0.0015 (ppm)
P (213.618 nm)	-0.0024 u	ppm	0.0011	46.97	2.1000	-0.0024 u (ppm)
Pb (220.353 nm)	0.0012 u	ppm	0.0020	> 100.00	10.9600	0.0012 u (ppm)
Sb (206.834 nm)	0.0042	ppm	0.0011	26.12	6.0570	0.0042 (ppm)
Se (196.026 nm)	0.0002 u	ppm	0.0008	> 100.00	1.6930	0.0002 u (ppm)
Si (251.611 nm)	0.0020	ppm	0.0009	47.96	4.8980	0.0020 (ppm)
Sn (189.925 nm)	0.0116	ppm	0.0035	30.18	6.3320	0.0116 (ppm)
Sr (421.552 nm)	0.0003	ppm	0.0001	30.11	55.5100	0.0003 (ppm)
Ti (336.122 nm)	0.0061	ppm	0.0009	15.05	456.7000	0.0061 (ppm)
Tl (190.794 nm)	0.0047	ppm	0.0060	> 100.00	10.5900	0.0047 (ppm)
V (292.401 nm)	0.0006	ppm	0.0001	20.76	91.8500	0.0006 (ppm)
W (207.912 nm)	0.0121	ppm	0.0013	10.56	13.8800	0.0121 (ppm)
Zn (202.548 nm)	0.0035	ppm	0.0000	1.30	62.3800	0.0035 (ppm)
Zr (343.823 nm)	0.0001 u	ppm	0.0002	> 100.00	821.6000	0.0001 u (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	1.0040	380000.0000	0.0006	0.06
Y_R 371.029	1.0160	51530.0000	0.0013	0.13

Sample Name: IPC2 6043787

Date: 1/15/2020 12:21:54 PM

Rack:Tube: S1:11

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.0001 u	ppm	0.0008	> 100.00	49.4500	0.0001 u (ppm)
Al (396.152 nm)	0.0007	ppm	0.0009	> 100.00	-300.8000	0.0007 (ppm)
As (188.980 nm)	0.0075	ppm	0.0020	26.67	3.2190	0.0075 (ppm)
B (249.678 nm)	0.0011	ppm	0.0007	66.32	-0.9727	0.0011 (ppm)
Ba (233.527 nm)	0.0001	ppm	0.0002	> 100.00	71.1700	0.0001 (ppm)
Be (234.861 nm)	0.0001	ppm	0.0000	14.61	30.0700	0.0001 (ppm)
Ca (422.673 nm)	-0.0009 u	ppm	0.0019	> 100.00	76.5900	-0.0009 u (ppm)
Cd (214.439 nm)	0.0000 u	ppm	0.0002	> 100.00	-5.3780	0.0000 u (ppm)
Co (228.615 nm)	-0.0001 u	ppm	0.0001	> 100.00	-9.8140	-0.0001 u (ppm)
Cr (205.560 nm)	0.0007	ppm	0.0002	22.03	3.8260	0.0007 (ppm)
Cu (324.754 nm)	0.0007	ppm	0.0009	> 100.00	162.1000	0.0007 (ppm)
Fe (238.204 nm)	0.0026 u	ppm	0.0042	> 100.00	-49.1500	0.0026 u (ppm)
K (766.491 nm)	0.0343	ppm	0.0219	63.86	-90.7500	0.0343 (ppm)
Li (670.783 nm)	0.0000 u	ppm	0.0008	> 100.00	129.2000	0.0000 u (ppm)
Mg (279.078 nm)	0.0013 u	ppm	0.0020	> 100.00	17.7500	0.0013 u (ppm)
Mn (259.372 nm)	0.0001	ppm	0.0000	6.01	56.1700	0.0001 (ppm)
Mo (204.598 nm)	0.0034	ppm	0.0021	62.75	11.2500	0.0034 (ppm)
Na (589.592 nm)	5.0470	ppm	0.1446	2.86	27510.0000	5.0470 (ppm)
Ni (231.604 nm)	0.0007	ppm	0.0002	36.34	-9.0270	0.0007 (ppm)
P (213.618 nm)	-0.0008 u	ppm	0.0005	58.97	3.4370	-0.0008 u (ppm)
Pb (220.353 nm)	-0.0006 u	ppm	0.0021	> 100.00	7.4120	-0.0006 u (ppm)
Sb (206.834 nm)	0.0027	ppm	0.0007	27.00	4.9310	0.0027 (ppm)
Se (196.026 nm)	-0.0006 u	ppm	0.0018	> 100.00	1.1420	-0.0006 u (ppm)
Si (251.611 nm)	0.0017	ppm	0.0012	69.54	3.2330	0.0017 (ppm)
Sn (189.925 nm)	0.0037	ppm	0.0024	64.37	1.7980	0.0037 (ppm)
Sr (421.552 nm)	0.0001	ppm	0.0000	22.04	-2.3220	0.0001 (ppm)
Ti (336.122 nm)	0.0021	ppm	0.0005	23.27	55.6300	0.0021 (ppm)
Tl (190.794 nm)	0.0021	ppm	0.0020	99.74	7.7650	0.0021 (ppm)
V (292.401 nm)	-0.0001 u	ppm	0.0002	> 100.00	70.9400	-0.0001 u (ppm)
W (207.912 nm)	0.0038	ppm	0.0004	11.77	0.3278	0.0038 (ppm)
Zn (202.548 nm)	0.0031	ppm	0.0000	1.54	56.4000	0.0031 (ppm)
Zr (343.823 nm)	0.0000 u	ppm	0.0001	> 100.00	812.5000	0.0000 u (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9958	376900.0000	0.0027	0.27
Y_R 371.029	0.9865	50040.0000	0.0187	1.89

Sample Name: ICB 6043772

Date: 1/15/2020 12:24:05 PM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0004 u	ppm	0.0001	20.04	28.9100	-0.0004 u (ppm)
Al (396.152 nm)	0.0008	ppm	0.0005	57.44	-300.5000	0.0008 (ppm)
As (188.980 nm)	0.0035	ppm	0.0040	> 100.00	0.8341	0.0035 (ppm)
B (249.678 nm)	0.0002 u	ppm	0.0004	> 100.00	-11.2300	0.0002 u (ppm)
Ba (233.527 nm)	0.0001	ppm	0.0000	15.52	67.0900	0.0001 (ppm)
Be (234.861 nm)	0.0000	ppm	0.0000	> 100.00	18.0900	0.0000 (ppm)
Ca (422.673 nm)	0.0018 u	ppm	0.0038	> 100.00	87.2400	0.0018 u (ppm)
Cd (214.439 nm)	0.0000 u	ppm	0.0001	> 100.00	-5.5220	0.0000 u (ppm)
Co (228.615 nm)	0.0000 u	ppm	0.0004	> 100.00	-8.1730	0.0000 u (ppm)
Cr (205.560 nm)	-0.0006 u	ppm	0.0001	13.36	-2.0310	-0.0006 u (ppm)
Cu (324.754 nm)	0.0003	ppm	0.0004	> 100.00	145.0000	0.0003 (ppm)
Fe (238.204 nm)	-0.0015 u	ppm	0.0009	59.29	-59.3300	-0.0015 u (ppm)
K (766.491 nm)	-0.0188 u	ppm	0.0497	> 100.00	-144.8000	-0.0188 u (ppm)
Li (670.783 nm)	-0.0014 u	ppm	0.0010	71.88	44.3000	-0.0014 u (ppm)
Mg (279.078 nm)	0.0008 u	ppm	0.0012	> 100.00	16.5600	0.0008 u (ppm)
Mn (259.372 nm)	0.0000 u	ppm	0.0000	> 100.00	41.3900	0.0000 u (ppm)
Mo (204.598 nm)	0.0018	ppm	0.0006	31.35	5.3820	0.0018 (ppm)
Na (589.592 nm)	-0.0396 u	ppm	0.0021	5.36	692.2000	-0.0396 u (ppm)
Ni (231.604 nm)	0.0010	ppm	0.0002	20.37	-7.7180	0.0010 (ppm)
P (213.618 nm)	-0.0018 u	ppm	0.0008	44.89	2.7570	-0.0018 u (ppm)
Pb (220.353 nm)	-0.0007 u	ppm	0.0040	> 100.00	7.2980	-0.0007 u (ppm)
Sb (206.834 nm)	0.0039	ppm	0.0005	12.45	5.9970	0.0039 (ppm)
Se (196.026 nm)	-0.0032 u	ppm	0.0026	79.89	-0.4367	-0.0032 u (ppm)
Si (251.611 nm)	0.0002	ppm	0.0000	5.61	-0.2219	0.0002 (ppm)
Sn (189.925 nm)	0.0038	ppm	0.0027	71.94	1.8380	0.0038 (ppm)
Sr (421.552 nm)	0.0000 u	ppm	0.0001	> 100.00	-47.4400	0.0000 u (ppm)
Ti (336.122 nm)	0.0011	ppm	0.0004	32.58	-48.3300	0.0011 (ppm)
Tl (190.794 nm)	0.0050	ppm	0.0028	56.38	11.0600	0.0050 (ppm)
V (292.401 nm)	0.0000 u	ppm	0.0000	> 100.00	75.6800	0.0000 u (ppm)
W (207.912 nm)	0.0027 u	ppm	0.0039	> 100.00	-1.4800	0.0027 u (ppm)
Zn (202.548 nm)	0.0002	ppm	0.0001	58.97	11.7100	0.0002 (ppm)
Zr (343.823 nm)	0.0000 u	ppm	0.0001	> 100.00	814.2000	0.0000 u (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9971	377400.0000	0.0025	0.25
Y_R 371.029	1.0090	51160.0000	0.0052	0.52

Sample Name: ICSA 6043781

Date: 1/15/2020 12:32:57 PM

Rack:Tube: S1:6

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0001 u	ppm	0.0001	> 100.00	-977.7000	-0.0001 u (ppm)
Al (396.152 nm)	615.3000 o	ppm	1.0700	0.17	18650000.0000	615.3000 o (ppm)
As (188.980 nm)	0.0089	ppm	0.0048	53.34	-26.5500	0.0089 (ppm)
B (249.678 nm)	-0.0024 u	ppm	0.0061	> 100.00	-706.2000	-0.0024 u (ppm)
Ba (233.527 nm)	0.0040	ppm	0.0000	0.81	546.6000	0.0040 (ppm)
Be (234.861 nm)	0.0005 u	ppm	0.0007	> 100.00	9183.0000	0.0005 u (ppm)
Ca (422.673 nm)	607.7000 o	ppm	3.8700	0.64	2370000.0000	607.7000 o (ppm)
Cd (214.439 nm)	0.0003 u	ppm	0.0006	> 100.00	89.5800	0.0003 u (ppm)
Co (228.615 nm)	0.0002 u	ppm	0.0029	> 100.00	77.6200	0.0002 u (ppm)
Cr (205.560 nm)	-0.0036 u	ppm	0.0016	44.09	5.9810	-0.0036 u (ppm)
Cu (324.754 nm)	-0.0027 u	ppm	0.0000	1.84	-121.8000	-0.0027 u (ppm)
Fe (238.204 nm)	597.3000 o	ppm	0.6081	0.10	1508000.0000	597.3000 o (ppm)
K (766.491 nm)	-0.5967 u	ppm	0.0581	9.74	-342.7000	-0.5967 u (ppm)
Li (670.783 nm)	-0.0105 u	ppm	0.0006	5.66	556.3000	-0.0105 u (ppm)
Mg (279.078 nm)	575.5000 o	ppm	1.1030	0.19	1553000.0000	575.5000 o (ppm)
Mn (259.372 nm)	0.0280	ppm	0.0018	6.40	70170.0000	0.0280 (ppm)
Mo (204.598 nm)	-0.0013 u	ppm	0.0004	33.35	59.2500	-0.0013 u (ppm)
Na (589.592 nm)	-0.6238 u	ppm	0.0112	1.79	2570.0000	-0.6238 u (ppm)
Ni (231.604 nm)	0.0018	ppm	0.0001	5.44	-43.3300	0.0018 (ppm)
P (213.618 nm)	-0.0466 u	ppm	0.0188	40.36	-9.9320	-0.0466 u (ppm)
Pb (220.353 nm)	0.0066	ppm	0.0040	60.30	-246.3000	0.0066 (ppm)
Sb (206.834 nm)	-0.0122 u	ppm	0.0102	83.69	-3.0450	-0.0122 u (ppm)
Se (196.026 nm)	-0.0025 u	ppm	0.0048	> 100.00	-138.4000	-0.0025 u (ppm)
Si (251.611 nm)	-0.0572 u	ppm	0.0010	1.73	-70.2800	-0.0572 u (ppm)
Sn (189.925 nm)	-0.0282 u	ppm	0.0059	21.05	-15.2500	-0.0282 u (ppm)
Sr (421.552 nm)	0.0034	ppm	0.0000	0.32	7629.0000	0.0034 (ppm)
Ti (336.122 nm)	-0.0001 u	ppm	0.0002	> 100.00	-656.9000	-0.0001 u (ppm)
Tl (190.794 nm)	-0.0084 u	ppm	0.0040	47.52	48.0300	-0.0084 u (ppm)
V (292.401 nm)	0.0003 u	ppm	0.0004	> 100.00	821.3000	0.0003 u (ppm)
W (207.912 nm)	-0.0074 u	ppm	0.0002	3.25	-38.4400	-0.0074 u (ppm)
Zn (202.548 nm)	-0.0063 u	ppm	0.0003	5.08	-284.4000	-0.0063 u (ppm)
Zr (343.823 nm)	0.1653	ppm	0.0001	0.05	2320.0000	0.1653 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.8419	318600.0000	0.0013	0.16
Y_R 371.029	0.9081	46060.0000	0.0018	0.20

Sample Name: ICSAB 6043782

Date: 1/15/2020 12:35:09 PM

Rack:Tube: S1:7

Weight (g): 1

Volume (mL): 1

Dilution: 1

**Analyte Results**

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.2759	ppm	0.0001	0.03	10120.0000	0.2759 (ppm)
Al (396.152 nm)	613.2000 o	ppm	0.1362	0.02	18590000.0000	613.2000 o (ppm)
As (188.980 nm)	0.5067	ppm	0.0078	1.55	272.8000	0.5067 (ppm)
B (249.678 nm)	0.5260	ppm	0.0070	1.33	4901.0000	0.5260 (ppm)
Ba (233.527 nm)	0.4774	ppm	0.0023	0.47	40990.0000	0.4774 (ppm)
Be (234.861 nm)	0.5276	ppm	0.0023	0.43	91810.0000	0.5276 (ppm)
Ca (422.673 nm)	607.4000 o	ppm	7.3830	1.22	2368000.0000	607.4000 o (ppm)
Cd (214.439 nm)	0.4641	ppm	0.0005	0.11	10100.0000	0.4641 (ppm)
Co (228.615 nm)	0.4582	ppm	0.0011	0.24	6001.0000	0.4582 (ppm)
Cr (205.560 nm)	0.4960	ppm	0.0034	0.68	2223.0000	0.4960 (ppm)
Cu (324.754 nm)	0.5459	ppm	0.0007	0.13	21330.0000	0.5459 (ppm)
Fe (238.204 nm)	592.1000 o	ppm	3.3490	0.57	1495000.0000	592.1000 o (ppm)
K (766.491 nm)	5.1000	ppm	0.0616	1.21	5467.0000	5.1000 (ppm)
Li (670.783 nm)	0.5411	ppm	0.0055	1.01	31960.0000	0.5411 (ppm)
Mg (279.078 nm)	582.3000 o	ppm	2.1790	0.37	1572000.0000	582.3000 o (ppm)
Mn (259.372 nm)	0.5221	ppm	0.0029	0.55	115500.0000	0.5221 (ppm)
Mo (204.598 nm)	0.5074	ppm	0.0043	0.84	2019.0000	0.5074 (ppm)
Na (589.592 nm)	4.8450	ppm	0.0417	0.86	31390.0000	4.8450 (ppm)
Ni (231.604 nm)	0.4567	ppm	0.0003	0.07	1953.0000	0.4567 (ppm)
P (213.618 nm)	0.4749	ppm	0.0067	1.41	355.6000	0.4749 (ppm)
Pb (220.353 nm)	0.4684	ppm	0.0028	0.60	667.7000	0.4684 (ppm)
Sb (206.834 nm)	0.5207	ppm	0.0244	4.68	463.0000	0.5207 (ppm)
Se (196.026 nm)	0.4747	ppm	0.0089	1.88	155.6000	0.4747 (ppm)
Si (251.611 nm)	2.5950	ppm	0.0084	0.32	5526.0000	2.5950 (ppm)
Sn (189.925 nm)	0.4582	ppm	0.0047	1.01	265.3000	0.4582 (ppm)
Sr (421.552 nm)	0.5168	ppm	0.0021	0.40	185200.0000	0.5168 (ppm)
Ti (336.122 nm)	0.5353	ppm	0.0013	0.24	53090.0000	0.5353 (ppm)
Tl (190.794 nm)	0.4625	ppm	0.0002	0.04	553.0000	0.4625 (ppm)
V (292.401 nm)	0.5179	ppm	0.0005	0.10	16520.0000	0.5179 (ppm)
W (207.912 nm)	0.4412	ppm	0.0006	0.13	697.2000	0.4412 (ppm)
Zn (202.548 nm)	0.4412	ppm	0.0007	0.16	6666.0000	0.4412 (ppm)
Zr (343.823 nm)	0.4180	ppm	0.0107	2.55	22850.0000	0.4180 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.8415	318500.0000	0.0010	0.12
Y_R 371.029	0.9055	45930.0000	0.0037	0.41

Sample Name: xRINSE 6043786

Date: 1/15/2020 12:37:21 PM

Rack:Tube: S1:8

Weight (g): 1

Volume (mL): 1

Dilution: 1

**Analyte Results**

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.0002	ppm	0.0000	22.48	53.0900	0.0002 (ppm)
Al (396.152 nm)	0.4731 Z	ppm	0.0950	20.09	14020.0000 Z	0.4731 Z (ppm)
As (188.980 nm)	0.0056	ppm	0.0049	87.37	2.0770	0.0056 (ppm)
B (249.678 nm)	0.0002 u	ppm	0.0005	> 100.00	-11.2800	0.0002 u (ppm)
Ba (233.527 nm)	0.0003	ppm	0.0001	21.60	85.4300	0.0003 (ppm)
Be (234.861 nm)	0.0003	ppm	0.0002	48.82	72.9500	0.0003 (ppm)
Ca (422.673 nm)	0.2779 Z	ppm	0.0135	4.84	1164.0000 Z	0.2779 Z (ppm)
Cd (214.439 nm)	0.0004	ppm	0.0001	23.43	2.4740	0.0004 (ppm)
Co (228.615 nm)	0.0005	ppm	0.0002	35.91	-1.8050	0.0005 (ppm)
Cr (205.560 nm)	-0.0001 u	ppm	0.0006	> 100.00	-0.0444	-0.0001 u (ppm)
Cu (324.754 nm)	0.0007	ppm	0.0003	43.70	162.7000	0.0007 (ppm)
Fe (238.204 nm)	0.3523 Z	ppm	0.0132	3.75	833.7000 Z	0.3523 Z (ppm)
K (766.491 nm)	0.0516 u	ppm	0.1236	> 100.00	-72.8300	0.0516 u (ppm)
Li (670.783 nm)	-0.0010 u	ppm	0.0010	96.20	68.7500	-0.0010 u (ppm)
Mg (279.078 nm)	0.4839 Z	ppm	0.1025	21.19	1320.0000 Z	0.4839 Z (ppm)
Mn (259.372 nm)	0.0006	ppm	0.0002	25.64	145.1000	0.0006 (ppm)
Mo (204.598 nm)	0.0040	ppm	0.0001	3.76	13.7000	0.0040 (ppm)
Na (589.592 nm)	-0.0166 u	ppm	0.0097	58.00	816.5000	-0.0166 u (ppm)
Ni (231.604 nm)	0.0008	ppm	0.0002	29.77	-8.3880	0.0008 (ppm)
P (213.618 nm)	-0.0045 u	ppm	0.0050	> 100.00	0.6497	-0.0045 u (ppm)
Pb (220.353 nm)	0.0016	ppm	0.0003	20.12	11.6800	0.0016 (ppm)
Sb (206.834 nm)	0.0015	ppm	0.0016	> 100.00	3.7860	0.0015 (ppm)
Se (196.026 nm)	0.0034	ppm	0.0040	> 100.00	3.5550	0.0034 (ppm)
Si (251.611 nm)	0.0040	ppm	0.0005	12.17	8.4060	0.0040 (ppm)
Sn (189.925 nm)	-0.0004 u	ppm	0.0013	> 100.00	-0.5514	-0.0004 u (ppm)
Sr (421.552 nm)	0.0002	ppm	0.0001	48.63	35.4200	0.0002 (ppm)
Ti (336.122 nm)	0.0007	ppm	0.0001	14.17	-85.5000	0.0007 (ppm)
Tl (190.794 nm)	0.0019	ppm	0.0005	29.70	7.5860	0.0019 (ppm)
V (292.401 nm)	0.0003 u	ppm	0.0006	> 100.00	82.7700	0.0003 u (ppm)
W (207.912 nm)	0.0063	ppm	0.0011	16.79	4.4190	0.0063 (ppm)
Zn (202.548 nm)	0.0009	ppm	0.0002	23.30	23.3400	0.0009 (ppm)
Zr (343.823 nm)	0.0006	ppm	0.0000	4.97	853.3000	0.0006 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9962	377100.0000	0.0028	0.28
Y_R 371.029	1.0050	50990.0000	0.0005	0.04

Sample Name: XICIS 6043785

Date: 1/15/2020 12:39:31 PM

Rack:Tube: S1:8

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0002 u	ppm	0.0001	36.89	36.0800	-0.0002 u (ppm)
Al (396.152 nm)	0.0571	ppm	0.0123	21.55	1406.0000	0.0571 (ppm)
As (188.980 nm)	0.0065	ppm	0.0033	50.33	2.6290	0.0065 (ppm)
B (249.678 nm)	0.0008	ppm	0.0009	> 100.00	-5.0630	0.0008 (ppm)
Ba (233.527 nm)	-0.0001 u	ppm	0.0001	96.10	55.2400	-0.0001 u (ppm)
Be (234.861 nm)	0.0000	ppm	0.0000	> 100.00	20.7900	0.0000 (ppm)
Ca (422.673 nm)	0.0487	ppm	0.0085	17.39	270.2000	0.0487 (ppm)
Cd (214.439 nm)	0.0000 u	ppm	0.0001	> 100.00	-6.9970	0.0000 u (ppm)
Co (228.615 nm)	0.0002	ppm	0.0003	> 100.00	-5.6600	0.0002 (ppm)
Cr (205.560 nm)	0.0003	ppm	0.0002	80.87	1.8430	0.0003 (ppm)
Cu (324.754 nm)	0.0002	ppm	0.0001	67.83	140.7000	0.0002 (ppm)
Fe (238.204 nm)	0.0553	ppm	0.0034	6.21	83.8700	0.0553 (ppm)
K (766.491 nm)	0.0511 u	ppm	0.0794	> 100.00	-73.5900	0.0511 u (ppm)
Li (670.783 nm)	-0.0002 u	ppm	0.0006	> 100.00	117.2000	-0.0002 u (ppm)
Mg (279.078 nm)	0.0640 Z	ppm	0.0143	22.28	187.0000 Z	0.0640 Z (ppm)
Mn (259.372 nm)	0.0001	ppm	0.0001	86.95	56.7800	0.0001 (ppm)
Mo (204.598 nm)	0.0006	ppm	0.0006	> 100.00	0.5422	0.0006 (ppm)
Na (589.592 nm)	-0.0376 u	ppm	0.0162	43.19	703.5000	-0.0376 u (ppm)
Ni (231.604 nm)	0.0000 u	ppm	0.0004	> 100.00	-11.7900	0.0000 u (ppm)
P (213.618 nm)	-0.0077 u	ppm	0.0065	84.51	-1.6860	-0.0077 u (ppm)
Pb (220.353 nm)	-0.0021 u	ppm	0.0007	34.44	4.4840	-0.0021 u (ppm)
Sb (206.834 nm)	0.0030	ppm	0.0030	97.71	5.2210	0.0030 (ppm)
Se (196.026 nm)	-0.0032 u	ppm	0.0015	47.42	-0.4156	-0.0032 u (ppm)
Si (251.611 nm)	-0.0006 u	ppm	0.0009	> 100.00	-1.6290	-0.0006 u (ppm)
Sn (189.925 nm)	0.0002	ppm	0.0000	12.13	-0.2222	0.0002 (ppm)
Sr (421.552 nm)	-0.0001 u	ppm	0.0001	81.99	-60.5900	-0.0001 u (ppm)
Ti (336.122 nm)	0.0001 u	ppm	0.0001	> 100.00	-150.0000	0.0001 u (ppm)
Tl (190.794 nm)	0.0021	ppm	0.0016	73.00	7.8870	0.0021 (ppm)
V (292.401 nm)	0.0002	ppm	0.0000	28.68	80.1500	0.0002 (ppm)
W (207.912 nm)	0.0026	ppm	0.0012	47.29	-1.6510	0.0026 (ppm)
Zn (202.548 nm)	0.0008	ppm	0.0001	15.46	21.6900	0.0008 (ppm)
Zr (343.823 nm)	0.0001	ppm	0.0001	60.22	821.0000	0.0001 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9970	377300.0000	0.0036	0.36
Y_R 371.029	1.0080	51130.0000	0.0042	0.42

Sample Name: XCRI 6043783

Date: 1/15/2020 12:41:43 PM

Rack:Tube: S1:9

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.0052	ppm	0.0001	2.40	262.8000	0.0052 (ppm)
Al (396.152 nm)	0.1122	ppm	0.0031	2.78	3120.0000	0.1122 (ppm)
As (188.980 nm)	0.0125	ppm	0.0033	26.66	6.2550	0.0125 (ppm)
B (249.678 nm)	0.0486	ppm	0.0017	3.45	496.8000	0.0486 (ppm)
Ba (233.527 nm)	0.0102	ppm	0.0001	0.92	933.3000	0.0102 (ppm)
Be (234.861 nm)	0.0021	ppm	0.0001	3.41	342.2000	0.0021 (ppm)
Ca (422.673 nm)	0.1157	ppm	0.0032	2.77	531.2000	0.1157 (ppm)
Cd (214.439 nm)	0.0050	ppm	0.0000	0.62	101.7000	0.0050 (ppm)
Co (228.615 nm)	0.0098	ppm	0.0002	1.89	118.6000	0.0098 (ppm)
Cr (205.560 nm)	0.0049	ppm	0.0001	2.16	22.5400	0.0049 (ppm)
Cu (324.754 nm)	0.0102	ppm	0.0002	2.24	532.8000	0.0102 (ppm)
Fe (238.204 nm)	0.1235	ppm	0.0054	4.40	256.3000	0.1235 (ppm)
K (766.491 nm)	0.4744	ppm	0.1759	37.09	358.1000	0.4744 (ppm)
Li (670.783 nm)	0.0482	ppm	0.0008	1.72	2866.0000	0.0482 (ppm)
Mg (279.078 nm)	0.0387 R	ppm	0.0016	4.18	118.6000 R	0.0387 R (ppm)
Mn (259.372 nm)	0.0195	ppm	0.0002	0.91	1872.0000	0.0195 (ppm)
Mo (204.598 nm)	0.0211	ppm	0.0001	0.67	79.3900	0.0211 (ppm)
Na (589.592 nm)	0.4721	ppm	0.0004	0.08	3394.0000	0.4721 (ppm)
Ni (231.604 nm)	0.0109	ppm	0.0001	1.22	35.8300	0.0109 (ppm)
P (213.618 nm)	0.2137	ppm	0.0086	4.04	162.9000	0.2137 (ppm)
Pb (220.353 nm)	0.0063	ppm	0.0002	3.76	20.9600	0.0063 (ppm)
Sb (206.834 nm)	0.0083	ppm	0.0017	20.14	9.5480	0.0083 (ppm)
Se (196.026 nm)	0.0139	ppm	0.0011	7.93	10.4500	0.0139 (ppm)
Si (251.611 nm)	0.2018	ppm	0.0018	0.90	431.7000	0.2018 (ppm)
Sn (189.925 nm)	0.0935	ppm	0.0015	1.56	53.5800	0.0935 (ppm)
Sr (421.552 nm)	0.0207	ppm	0.0000	0.16	7122.0000	0.0207 (ppm)
Ti (336.122 nm)	0.0050	ppm	0.0001	1.61	352.0000	0.0050 (ppm)
Tl (190.794 nm)	0.0113	ppm	0.0003	2.79	17.8200	0.0113 (ppm)
V (292.401 nm)	0.0101	ppm	0.0002	1.56	379.1000	0.0101 (ppm)
W (207.912 nm)	0.0917	ppm	0.0009	1.03	143.7000	0.0917 (ppm)
Zn (202.548 nm)	0.0241	ppm	0.0003	1.23	382.1000	0.0241 (ppm)
Zr (343.823 nm)	0.0993	ppm	0.0022	2.19	8844.0000	0.0993 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9984	377900.0000	0.0040	0.40
Y_R 371.029	1.0080	51130.0000	0.0014	0.14

Sample Name: CRI 6043784

Date: 1/15/2020 12:43:55 PM

Rack:Tube: S1:10

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.0105	ppm	0.0003	2.77	488.3000	0.0105 (ppm)
Al (396.152 nm)	0.1998	ppm	0.0008	0.40	5823.0000	0.1998 (ppm)
As (188.980 nm)	0.0234	ppm	0.0059	25.39	12.8900	0.0234 (ppm)
B (249.678 nm)	0.0994	ppm	0.0013	1.29	1029.0000	0.0994 (ppm)
Ba (233.527 nm)	0.0201	ppm	0.0004	2.01	1777.0000	0.0201 (ppm)
Be (234.861 nm)	0.0041	ppm	0.0000	0.59	661.0000	0.0041 (ppm)
Ca (422.673 nm)	0.2122	ppm	0.0084	3.96	907.0000	0.2122 (ppm)
Cd (214.439 nm)	0.0102	ppm	0.0001	0.90	213.6000	0.0102 (ppm)
Co (228.615 nm)	0.0208	ppm	0.0001	0.61	260.4000	0.0208 (ppm)
Cr (205.560 nm)	0.0095	ppm	0.0005	4.89	43.0200	0.0095 (ppm)
Cu (324.754 nm)	0.0202	ppm	0.0002	0.90	924.6000	0.0202 (ppm)
Fe (238.204 nm)	0.2147	ppm	0.0007	0.33	486.4000	0.2147 (ppm)
K (766.491 nm)	0.9969	ppm	0.0296	2.97	890.9000	0.9969 (ppm)
Li (670.783 nm)	0.0995	ppm	0.0008	0.84	5786.0000	0.0995 (ppm)
Mg (279.078 nm)	0.0475	ppm	0.0027	5.61	142.1000	0.0475 (ppm)
Mn (259.372 nm)	0.0392	ppm	0.0000	0.07	3708.0000	0.0392 (ppm)
Mo (204.598 nm)	0.0427	ppm	0.0007	1.59	162.7000	0.0427 (ppm)
Na (589.592 nm)	0.9944	ppm	0.0009	0.09	6153.0000	0.9944 (ppm)
Ni (231.604 nm)	0.0202	ppm	0.0000	0.20	76.8200	0.0202 (ppm)
P (213.618 nm)	0.4228	ppm	0.0070	1.66	318.2000	0.4228 (ppm)
Pb (220.353 nm)	0.0100	ppm	0.0010	9.74	28.3300	0.0100 (ppm)
Sb (206.834 nm)	0.0235	ppm	0.0003	1.38	22.6500	0.0235 (ppm)
Se (196.026 nm)	0.0179	ppm	0.0006	3.60	13.4200	0.0179 (ppm)
Si (251.611 nm)	0.4047	ppm	0.0032	0.79	867.5000	0.4047 (ppm)
Sn (189.925 nm)	0.1987	ppm	0.0081	4.06	114.3000	0.1987 (ppm)
Sr (421.552 nm)	0.0408	ppm	0.0003	0.79	14070.0000	0.0408 (ppm)
Ti (336.122 nm)	0.0102	ppm	0.0000	0.28	879.3000	0.0102 (ppm)
Tl (190.794 nm)	0.0208	ppm	0.0007	3.36	28.1500	0.0208 (ppm)
V (292.401 nm)	0.0203	ppm	0.0003	1.33	684.8000	0.0203 (ppm)
W (207.912 nm)	0.1906	ppm	0.0048	2.54	304.7000	0.1906 (ppm)
Zn (202.548 nm)	0.0437	ppm	0.0004	0.85	685.5000	0.0437 (ppm)
Zr (343.823 nm)	0.2080	ppm	0.0009	0.45	17640.0000	0.2080 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9995	378300.0000	0.0010	0.10
Y_R 371.029	1.0160	51510.0000	0.0026	0.26

Sample Name: MB 440-589604/1-A@5

Date: 1/15/2020 12:46:07 PM

Rack:Tube: 1:60

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0001 u	ppm	0.0000	52.40	43.1400	-0.0001 u (ppm)
Al (396.152 nm)	0.0038	ppm	0.0002	6.47	-209.1000	0.0038 (ppm)
As (188.980 nm)	0.0031	ppm	0.0003	8.14	0.5717	0.0031 (ppm)
B (249.678 nm)	0.0007	ppm	0.0007	98.20	-5.5650	0.0007 (ppm)
Ba (233.527 nm)	0.0001	ppm	0.0000	39.46	65.5200	0.0001 (ppm)
Be (234.861 nm)	0.0000 u	ppm	0.0000	95.20	8.1780	0.0000 u (ppm)
Ca (422.673 nm)	0.0219	ppm	0.0039	17.64	165.8000	0.0219 (ppm)
Cd (214.439 nm)	0.0001	ppm	0.0001	> 100.00	-3.3690	0.0001 (ppm)
Co (228.615 nm)	0.0000 u	ppm	0.0005	> 100.00	-8.3780	0.0000 u (ppm)
Cr (205.560 nm)	0.0000 u	ppm	0.0007	> 100.00	0.5282	0.0000 u (ppm)
Cu (324.754 nm)	0.0033	ppm	0.0000	0.05	263.7000	0.0033 (ppm)
Fe (238.204 nm)	0.0275	ppm	0.0014	5.08	13.9500	0.0275 (ppm)
K (766.491 nm)	-0.0356 u	ppm	0.1398	> 100.00	-162.0000	-0.0356 u (ppm)
Li (670.783 nm)	-0.0016 u	ppm	0.0003	19.93	35.2900	-0.0016 u (ppm)
Mg (279.078 nm)	0.0041	ppm	0.0026	64.32	25.3700	0.0041 (ppm)
Mn (259.372 nm)	0.0003	ppm	0.0000	6.20	78.9500	0.0003 (ppm)
Mo (204.598 nm)	0.0008	ppm	0.0003	33.48	1.3260	0.0008 (ppm)
Na (589.592 nm)	-0.0399 u	ppm	0.0087	21.74	690.9000	-0.0399 u (ppm)
Ni (231.604 nm)	0.0001 u	ppm	0.0011	> 100.00	-11.3800	0.0001 u (ppm)
P (213.618 nm)	0.0010 u	ppm	0.0047	> 100.00	4.7180	0.0010 u (ppm)
Pb (220.353 nm)	0.0000 u	ppm	0.0002	> 100.00	8.7710	0.0000 u (ppm)
Sb (206.834 nm)	0.0049	ppm	0.0013	25.39	6.9270	0.0049 (ppm)
Se (196.026 nm)	0.0021 u	ppm	0.0041	> 100.00	2.7640	0.0021 u (ppm)
Si (251.611 nm)	0.0025	ppm	0.0016	62.76	4.9790	0.0025 (ppm)
Sn (189.925 nm)	0.0055	ppm	0.0004	7.82	2.8530	0.0055 (ppm)
Sr (421.552 nm)	0.0002	ppm	0.0001	62.93	24.8900	0.0002 (ppm)
Ti (336.122 nm)	0.0003	ppm	0.0000	6.84	-132.0000	0.0003 (ppm)
Tl (190.794 nm)	-0.0020 u	ppm	0.0001	5.49	3.2970	-0.0020 u (ppm)
V (292.401 nm)	-0.0002 u	ppm	0.0002	> 100.00	70.0300	-0.0002 u (ppm)
W (207.912 nm)	0.0061	ppm	0.0032	53.39	4.0600	0.0061 (ppm)
Zn (202.548 nm)	0.0014	ppm	0.0004	25.45	31.2300	0.0014 (ppm)
Zr (343.823 nm)	0.0071	ppm	0.0003	3.53	1392.0000	0.0071 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9999	378500.0000	0.0005	0.05
Y_R 371.029	1.0180	51650.0000	0.0039	0.39

Sample Name: LCS 440-589604/2-A@5

Date: 1/15/2020 12:48:19 PM

Rack:Tube: 2:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.0433	ppm	0.0004	0.97	1797.0000	0.0433 (ppm)
Al (396.152 nm)	0.2598	ppm	0.0043	1.65	7640.0000	0.2598 (ppm)
As (188.980 nm)	0.0908	ppm	0.0010	1.07	53.7400	0.0908 (ppm)
B (249.678 nm)	0.1387	ppm	0.0010	0.69	1460.0000	0.1387 (ppm)
Ba (233.527 nm)	0.0446	ppm	0.0008	1.81	3868.0000	0.0446 (ppm)
Be (234.861 nm)	0.0130	ppm	0.0002	1.65	2056.0000	0.0130 (ppm)
Ca (422.673 nm)	0.7026	ppm	0.0262	3.72	2819.0000	0.7026 (ppm)
Cd (214.439 nm)	0.0133	ppm	0.0003	2.30	281.3000	0.0133 (ppm)
Co (228.615 nm)	0.0269	ppm	0.0005	1.91	339.3000	0.0269 (ppm)
Cr (205.560 nm)	0.0272	ppm	0.0007	2.67	121.5000	0.0272 (ppm)
Cu (324.754 nm)	0.0586	ppm	0.0006	1.05	2426.0000	0.0586 (ppm)
Fe (238.204 nm)	0.2869	ppm	0.0012	0.41	668.6000	0.2869 (ppm)
K (766.491 nm)	1.3120	ppm	0.0614	4.68	1212.0000	1.3120 (ppm)
Li (670.783 nm)	0.1361	ppm	0.0011	0.80	7870.0000	0.1361 (ppm)
Mg (279.078 nm)	0.2730	ppm	0.0055	2.00	750.9000	0.2730 (ppm)
Mn (259.372 nm)	0.0548	ppm	0.0008	1.46	5163.0000	0.0548 (ppm)
Mo (204.598 nm)	0.0572	ppm	0.0016	2.80	218.5000	0.0572 (ppm)
Na (589.592 nm)	1.7180	ppm	0.0138	0.81	9965.0000	1.7180 (ppm)
Ni (231.604 nm)	0.0539	ppm	0.0004	0.80	224.6000	0.0539 (ppm)
P (213.618 nm)	0.1449	ppm	0.0003	0.19	109.6000	0.1449 (ppm)
Pb (220.353 nm)	0.0556	ppm	0.0004	0.75	118.4000	0.0556 (ppm)
Sb (206.834 nm)	0.2987	ppm	0.0006	0.21	265.3000	0.2987 (ppm)
Se (196.026 nm)	0.0844	ppm	0.0009	1.10	53.3500	0.0844 (ppm)
Si (251.611 nm)	0.0295	ppm	0.0018	6.09	75.8200	0.0295 (ppm)
Sn (189.925 nm)	0.2745	ppm	0.0049	1.79	158.0000	0.2745 (ppm)
Sr (421.552 nm)	0.1371	ppm	0.0009	0.64	47370.0000	0.1371 (ppm)
Ti (336.122 nm)	0.0538	ppm	0.0008	1.58	5247.0000	0.0538 (ppm)
Tl (190.794 nm)	0.2635	ppm	0.0030	1.14	296.2000	0.2635 (ppm)
V (292.401 nm)	0.0268	ppm	0.0001	0.24	880.5000	0.0268 (ppm)
W (207.912 nm)	0.0939	ppm	0.0009	1.00	148.7000	0.0939 (ppm)
Zn (202.548 nm)	0.1407	ppm	0.0025	1.81	2182.0000	0.1407 (ppm)
Zr (343.823 nm)	0.1671	ppm	0.0074	4.43	14330.0000	0.1671 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9938	376200.0000	0.0041	0.42
Y_R 371.029	1.0120	51340.0000	0.0010	0.10

Sample Name: LCS 440-589604/3-A@5

Date: 1/15/2020 12:50:31 PM

Rack:Tube: 2:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.0448	ppm	0.0004	0.89	1853.0000	0.0448 (ppm)
Al (396.152 nm)	0.2691	ppm	0.0016	0.59	7913.0000	0.2691 (ppm)
As (188.980 nm)	0.0930	ppm	0.0019	2.08	55.0800	0.0930 (ppm)
B (249.678 nm)	0.1399	ppm	0.0037	2.67	1472.0000	0.1399 (ppm)
Ba (233.527 nm)	0.0463	ppm	0.0008	1.74	4012.0000	0.0463 (ppm)
Be (234.861 nm)	0.0134	ppm	0.0001	0.59	2123.0000	0.0134 (ppm)
Ca (422.673 nm)	0.7417	ppm	0.0022	0.29	2971.0000	0.7417 (ppm)
Cd (214.439 nm)	0.0139	ppm	0.0001	0.43	294.1000	0.0139 (ppm)
Co (228.615 nm)	0.0280	ppm	0.0002	0.70	353.5000	0.0280 (ppm)
Cr (205.560 nm)	0.0277	ppm	0.0002	0.83	123.4000	0.0277 (ppm)
Cu (324.754 nm)	0.0606	ppm	0.0006	0.95	2505.0000	0.0606 (ppm)
Fe (238.204 nm)	0.2961	ppm	0.0008	0.28	691.9000	0.2961 (ppm)
K (766.491 nm)	1.4460	ppm	0.0096	0.66	1349.0000	1.4460 (ppm)
Li (670.783 nm)	0.1419	ppm	0.0019	1.31	8199.0000	0.1419 (ppm)
Mg (279.078 nm)	0.2843	ppm	0.0065	2.29	781.5000	0.2843 (ppm)
Mn (259.372 nm)	0.0568	ppm	0.0005	0.89	5353.0000	0.0568 (ppm)
Mo (204.598 nm)	0.0591	ppm	0.0007	1.22	226.1000	0.0591 (ppm)
Na (589.592 nm)	1.7870	ppm	0.0137	0.76	10330.0000	1.7870 (ppm)
Ni (231.604 nm)	0.0555	ppm	0.0012	2.19	231.7000	0.0555 (ppm)
P (213.618 nm)	0.1466	ppm	0.0060	4.11	110.8000	0.1466 (ppm)
Pb (220.353 nm)	0.0549	ppm	0.0004	0.77	116.9000	0.0549 (ppm)
Sb (206.834 nm)	0.3069	ppm	0.0015	0.50	272.5000	0.3069 (ppm)
Se (196.026 nm)	0.0801	ppm	0.0015	1.89	50.7500	0.0801 (ppm)
Si (251.611 nm)	0.0274	ppm	0.0021	7.71	71.0800	0.0274 (ppm)
Sn (189.925 nm)	0.2808	ppm	0.0008	0.30	161.6000	0.2808 (ppm)
Sr (421.552 nm)	0.1425	ppm	0.0007	0.51	49230.0000	0.1425 (ppm)
Ti (336.122 nm)	0.0563	ppm	0.0005	0.87	5496.0000	0.0563 (ppm)
Tl (190.794 nm)	0.2731	ppm	0.0050	1.82	306.8000	0.2731 (ppm)
V (292.401 nm)	0.0279	ppm	0.0005	1.89	916.6000	0.0279 (ppm)
W (207.912 nm)	0.0944	ppm	0.0016	1.68	149.6000	0.0944 (ppm)
Zn (202.548 nm)	0.1454	ppm	0.0014	0.93	2254.0000	0.1454 (ppm)
Zr (343.823 nm)	0.1234	ppm	0.0022	1.76	10790.0000	0.1234 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9973	377500.0000	0.0036	0.36
Y_R 371.029	1.0080	51140.0000	0.0004	0.04

Sample Name: LCS 440-589604/4-A@5

Date: 1/15/2020 12:52:43 PM

Rack:Tube: 2:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.0425	ppm	0.0002	0.43	1759.0000	0.0425 (ppm)
Al (396.152 nm)	0.2583	ppm	0.0021	0.81	7577.0000	0.2583 (ppm)
As (188.980 nm)	0.0929	ppm	0.0040	4.29	54.9900	0.0929 (ppm)
B (249.678 nm)	0.1361	ppm	0.0054	3.96	1432.0000	0.1361 (ppm)
Ba (233.527 nm)	0.0440	ppm	0.0003	0.70	3822.0000	0.0440 (ppm)
Be (234.861 nm)	0.0128	ppm	0.0001	0.69	2028.0000	0.0128 (ppm)
Ca (422.673 nm)	0.7112	ppm	0.0094	1.32	2853.0000	0.7112 (ppm)
Cd (214.439 nm)	0.0131	ppm	0.0001	0.51	275.6000	0.0131 (ppm)
Co (228.615 nm)	0.0267	ppm	0.0001	0.34	336.9000	0.0267 (ppm)
Cr (205.560 nm)	0.0269	ppm	0.0002	0.59	119.8000	0.0269 (ppm)
Cu (324.754 nm)	0.0575	ppm	0.0003	0.54	2384.0000	0.0575 (ppm)
Fe (238.204 nm)	0.2908	ppm	0.0023	0.79	678.3000	0.2908 (ppm)
K (766.491 nm)	1.2390	ppm	0.0825	6.66	1137.0000	1.2390 (ppm)
Li (670.783 nm)	0.1345	ppm	0.0016	1.16	7777.0000	0.1345 (ppm)
Mg (279.078 nm)	0.2710	ppm	0.0046	1.68	745.6000	0.2710 (ppm)
Mn (259.372 nm)	0.0541	ppm	0.0003	0.56	5098.0000	0.0541 (ppm)
Mo (204.598 nm)	0.0564	ppm	0.0020	3.50	215.5000	0.0564 (ppm)
Na (589.592 nm)	1.7080	ppm	0.0026	0.15	9913.0000	1.7080 (ppm)
Ni (231.604 nm)	0.0537	ppm	0.0023	4.24	223.9000	0.0537 (ppm)
P (213.618 nm)	0.1458	ppm	0.0036	2.45	110.3000	0.1458 (ppm)
Pb (220.353 nm)	0.0550	ppm	0.0034	6.10	117.3000	0.0550 (ppm)
Sb (206.834 nm)	0.2896	ppm	0.0115	3.97	257.3000	0.2896 (ppm)
Se (196.026 nm)	0.0847	ppm	0.0018	2.17	53.5200	0.0847 (ppm)
Si (251.611 nm)	0.0342	ppm	0.0037	10.68	84.2400	0.0342 (ppm)
Sn (189.925 nm)	0.2703	ppm	0.0020	0.75	155.5000	0.2703 (ppm)
Sr (421.552 nm)	0.1363	ppm	0.0015	1.13	47100.0000	0.1363 (ppm)
Ti (336.122 nm)	0.0536	ppm	0.0004	0.76	5224.0000	0.0536 (ppm)
Tl (190.794 nm)	0.2622	ppm	0.0016	0.61	294.9000	0.2622 (ppm)
V (292.401 nm)	0.0264	ppm	0.0002	0.66	869.2000	0.0264 (ppm)
W (207.912 nm)	0.0875	ppm	0.0005	0.58	138.3000	0.0875 (ppm)
Zn (202.548 nm)	0.1389	ppm	0.0010	0.69	2153.0000	0.1389 (ppm)
Zr (343.823 nm)	0.1013	ppm	0.0010	0.98	9001.0000	0.1013 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9953	376700.0000	0.0033	0.33
Y_R 371.029	1.0100	51230.0000	0.0016	0.16

Sample Name: LCS 440-589604/5-A@5

Date: 1/15/2020 12:54:55 PM

Rack:Tube: 2:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.0448	ppm	0.0011	2.53	1849.0000	0.0448 (ppm)
Al (396.152 nm)	0.2738	ppm	0.0059	2.17	8051.0000	0.2738 (ppm)
As (188.980 nm)	0.0990	ppm	0.0060	6.01	58.7000	0.0990 (ppm)
B (249.678 nm)	0.1440	ppm	0.0023	1.62	1515.0000	0.1440 (ppm)
Ba (233.527 nm)	0.0466	ppm	0.0006	1.32	4043.0000	0.0466 (ppm)
Be (234.861 nm)	0.0136	ppm	0.0003	1.87	2152.0000	0.0136 (ppm)
Ca (422.673 nm)	0.7522	ppm	0.0128	1.70	3013.0000	0.7522 (ppm)
Cd (214.439 nm)	0.0139	ppm	0.0002	1.65	293.9000	0.0139 (ppm)
Co (228.615 nm)	0.0286	ppm	0.0004	1.36	361.6000	0.0286 (ppm)
Cr (205.560 nm)	0.0290	ppm	0.0001	0.45	129.4000	0.0290 (ppm)
Cu (324.754 nm)	0.0610	ppm	0.0015	2.44	2519.0000	0.0610 (ppm)
Fe (238.204 nm)	0.3022	ppm	0.0003	0.10	707.2000	0.3022 (ppm)
K (766.491 nm)	1.3520	ppm	0.0913	6.75	1252.0000	1.3520 (ppm)
Li (670.783 nm)	0.1410	ppm	0.0023	1.65	8149.0000	0.1410 (ppm)
Mg (279.078 nm)	0.2860	ppm	0.0005	0.16	786.0000	0.2860 (ppm)
Mn (259.372 nm)	0.0578	ppm	0.0009	1.56	5438.0000	0.0578 (ppm)
Mo (204.598 nm)	0.0613	ppm	0.0010	1.63	234.6000	0.0613 (ppm)
Na (589.592 nm)	1.8020	ppm	0.0167	0.93	10410.0000	1.8020 (ppm)
Ni (231.604 nm)	0.0574	ppm	0.0012	2.11	239.9000	0.0574 (ppm)
P (213.618 nm)	0.1544	ppm	0.0005	0.32	116.5000	0.1544 (ppm)
Pb (220.353 nm)	0.0598	ppm	0.0031	5.11	126.6000	0.0598 (ppm)
Sb (206.834 nm)	0.3081	ppm	0.0047	1.52	273.6000	0.3081 (ppm)
Se (196.026 nm)	0.0849	ppm	0.0052	6.10	53.6300	0.0849 (ppm)
Si (251.611 nm)	0.0373	ppm	0.0088	23.50	91.3500	0.0373 (ppm)
Sn (189.925 nm)	0.2837	ppm	0.0073	2.56	163.2000	0.2837 (ppm)
Sr (421.552 nm)	0.1429	ppm	0.0007	0.47	49400.0000	0.1429 (ppm)
Ti (336.122 nm)	0.0572	ppm	0.0006	1.12	5587.0000	0.0572 (ppm)
Tl (190.794 nm)	0.2840	ppm	0.0017	0.59	318.9000	0.2840 (ppm)
V (292.401 nm)	0.0288	ppm	0.0007	2.43	943.5000	0.0288 (ppm)
W (207.912 nm)	0.0935	ppm	0.0009	0.98	148.3000	0.0935 (ppm)
Zn (202.548 nm)	0.1485	ppm	0.0024	1.62	2302.0000	0.1485 (ppm)
Zr (343.823 nm)	0.1009	ppm	0.0029	2.88	8972.0000	0.1009 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9947	376500.0000	0.0012	0.12
Y_R 371.029	1.0120	51330.0000	0.0007	0.07

Sample Name: CCV 6043773

Date: 1/15/2020 12:57:07 PM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.5018	ppm	0.0018	0.35	20250.0000	0.5018 (ppm)
Al (396.152 nm)	1.0040	ppm	0.0028	0.28	31220.0000	1.0040 (ppm)
As (188.980 nm)	1.0130	ppm	0.0020	0.20	607.5000	1.0130 (ppm)
B (249.678 nm)	1.0100	ppm	0.0047	0.46	10680.0000	1.0100 (ppm)
Ba (233.527 nm)	0.9962	ppm	0.0010	0.10	85160.0000	0.9962 (ppm)
Be (234.861 nm)	1.0070	ppm	0.0035	0.35	157900.0000	1.0070 (ppm)
Ca (422.673 nm)	5.0170	ppm	0.0106	0.21	19640.0000	5.0170 (ppm)
Cd (214.439 nm)	1.0080	ppm	0.0024	0.24	21760.0000	1.0080 (ppm)
Co (228.615 nm)	1.0110	ppm	0.0044	0.44	13060.0000	1.0110 (ppm)
Cr (205.560 nm)	1.0110	ppm	0.0024	0.23	4486.0000	1.0110 (ppm)
Cu (324.754 nm)	1.0060	ppm	0.0021	0.21	39490.0000	1.0060 (ppm)
Fe (238.204 nm)	1.0070	ppm	0.0027	0.27	2485.0000	1.0070 (ppm)
K (766.491 nm)	9.9810	ppm	0.0122	0.12	10050.0000	9.9810 (ppm)
Li (670.783 nm)	1.0010	ppm	0.0017	0.17	56980.0000	1.0010 (ppm)
Mg (279.078 nm)	4.9870	ppm	0.0126	0.25	13480.0000	4.9870 (ppm)
Mn (259.372 nm)	1.0050	ppm	0.0023	0.23	93450.0000	1.0050 (ppm)
Mo (204.598 nm)	1.0010	ppm	0.0016	0.16	3854.0000	1.0010 (ppm)
Na (589.592 nm)	9.9660	ppm	0.0091	0.09	53510.0000	9.9660 (ppm)
Ni (231.604 nm)	1.0100	ppm	0.0029	0.29	4420.0000	1.0100 (ppm)
P (213.618 nm)	1.0000	ppm	0.0047	0.47	706.5000	1.0000 (ppm)
Pb (220.353 nm)	1.0050	ppm	0.0036	0.35	1992.0000	1.0050 (ppm)
Sb (206.834 nm)	1.0040	ppm	0.0200	1.99	881.1000	1.0040 (ppm)
Se (196.026 nm)	1.0080	ppm	0.0121	1.20	620.5000	1.0080 (ppm)
Si (251.611 nm)	5.0450	ppm	0.0636	1.26	10670.0000	5.0450 (ppm)
Sn (189.925 nm)	1.0110	ppm	0.0091	0.90	583.2000	1.0110 (ppm)
Sr (421.552 nm)	1.0050	ppm	0.0004	0.04	347600.0000	1.0050 (ppm)
Ti (336.122 nm)	1.0070	ppm	0.0048	0.48	101000.0000	1.0070 (ppm)
Tl (190.794 nm)	1.0040	ppm	0.0038	0.38	1087.0000	1.0040 (ppm)
V (292.401 nm)	1.0070	ppm	0.0026	0.26	30610.0000	1.0070 (ppm)
W (207.912 nm)	1.0100	ppm	0.0010	0.10	1651.0000	1.0100 (ppm)
Zn (202.548 nm)	1.0090	ppm	0.0043	0.43	15640.0000	1.0090 (ppm)
Zr (343.823 nm)	1.0070	ppm	0.0051	0.51	82300.0000	1.0070 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9821	371700.0000	0.0014	0.15
Y_R 371.029	1.0080	51110.0000	0.0035	0.34

Sample Name: CCB 6043772

Date: 1/15/2020 12:59:19 PM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.0004	ppm	0.0001	13.57	62.1800	0.0004 (ppm)
Al (396.152 nm)	0.0009	ppm	0.0004	45.40	-288.1000	0.0009 (ppm)
As (188.980 nm)	0.0069	ppm	0.0032	46.26	2.8930	0.0069 (ppm)
B (249.678 nm)	0.0016	ppm	0.0000	1.02	3.8310	0.0016 (ppm)
Ba (233.527 nm)	0.0004	ppm	0.0002	53.07	91.4300	0.0004 (ppm)
Be (234.861 nm)	0.0005	ppm	0.0001	26.78	90.6400	0.0005 (ppm)
Ca (422.673 nm)	0.0080	ppm	0.0051	64.71	111.3000	0.0080 (ppm)
Cd (214.439 nm)	0.0004	ppm	0.0001	14.41	2.7770	0.0004 (ppm)
Co (228.615 nm)	-0.0002 u	ppm	0.0010	> 100.00	-11.3900	-0.0002 u (ppm)
Cr (205.560 nm)	-0.0001 u	ppm	0.0006	> 100.00	0.0847	-0.0001 u (ppm)
Cu (324.754 nm)	0.0008	ppm	0.0000	2.88	167.4000	0.0008 (ppm)
Fe (238.204 nm)	0.0055	ppm	0.0002	2.80	-41.7900	0.0055 (ppm)
K (766.491 nm)	0.0017 u	ppm	0.0300	> 100.00	-123.9000	0.0017 u (ppm)
Li (670.783 nm)	-0.0010 u	ppm	0.0015	> 100.00	70.3600	-0.0010 u (ppm)
Mg (279.078 nm)	0.0037	ppm	0.0019	50.60	24.2000	0.0037 (ppm)
Mn (259.372 nm)	0.0005	ppm	0.0003	59.68	97.8900	0.0005 (ppm)
Mo (204.598 nm)	0.0123	ppm	0.0009	7.09	45.8200	0.0123 (ppm)
Na (589.592 nm)	-0.0782 u	ppm	0.0026	3.26	489.1000	-0.0782 u (ppm)
Ni (231.604 nm)	0.0014	ppm	0.0001	6.33	-5.9660	0.0014 (ppm)
P (213.618 nm)	-0.0008 u	ppm	0.0013	> 100.00	3.3090	-0.0008 u (ppm)
Pb (220.353 nm)	0.0027	ppm	0.0002	8.57	14.0700	0.0027 (ppm)
Sb (206.834 nm)	0.0041	ppm	0.0023	55.65	5.9460	0.0041 (ppm)
Se (196.026 nm)	0.0046	ppm	0.0022	47.82	4.3530	0.0046 (ppm)
Si (251.611 nm)	0.0036	ppm	0.0009	23.72	8.1240	0.0036 (ppm)
Sn (189.925 nm)	0.0060	ppm	0.0018	30.01	3.1050	0.0060 (ppm)
Sr (421.552 nm)	0.0002	ppm	0.0001	30.04	37.1000	0.0002 (ppm)
Ti (336.122 nm)	0.0053 Z	ppm	0.0006	10.92	373.7000 Z	0.0053 Z (ppm)
Tl (190.794 nm)	0.0040	ppm	0.0008	19.71	9.9220	0.0040 (ppm)
V (292.401 nm)	0.0005	ppm	0.0002	40.48	87.6800	0.0005 (ppm)
W (207.912 nm)	0.0088	ppm	0.0004	4.08	8.5120	0.0088 (ppm)
Zn (202.548 nm)	0.0008	ppm	0.0001	8.78	20.9400	0.0008 (ppm)
Zr (343.823 nm)	0.0003	ppm	0.0001	22.30	837.6000	0.0003 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9993	378200.0000	0.0016	0.16
Y_R 371.029	1.0160	51550.0000	0.0040	0.39

Sample Name: CCB 6043772

Date: 1/15/2020 1:03:09 PM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0003 u	ppm	0.0001	42.35	33.4600	-0.0003 u (ppm)
Al (396.152 nm)	0.0013	ppm	0.0000	2.84	-285.7000	0.0013 (ppm)
As (188.980 nm)	0.0018	ppm	0.0015	82.25	-0.2309	0.0018 (ppm)
B (249.678 nm)	0.0012	ppm	0.0005	45.53	-0.3103	0.0012 (ppm)
Ba (233.527 nm)	0.0001	ppm	0.0000	23.30	68.4900	0.0001 (ppm)
Be (234.861 nm)	0.0001	ppm	0.0000	37.26	23.6400	0.0001 (ppm)
Ca (422.673 nm)	0.0032 u	ppm	0.0069	> 100.00	92.9500	0.0032 u (ppm)
Cd (214.439 nm)	0.0001 u	ppm	0.0002	> 100.00	-4.8610	0.0001 u (ppm)
Co (228.615 nm)	0.0000 u	ppm	0.0005	> 100.00	-8.8800	0.0000 u (ppm)
Cr (205.560 nm)	-0.0003 u	ppm	0.0002	73.17	-0.7668	-0.0003 u (ppm)
Cu (324.754 nm)	0.0003	ppm	0.0000	15.59	146.4000	0.0003 (ppm)
Fe (238.204 nm)	-0.0029 u	ppm	0.0003	11.20	-62.8500	-0.0029 u (ppm)
K (766.491 nm)	-0.0783 u	ppm	0.0206	26.25	-205.5000	-0.0783 u (ppm)
Li (670.783 nm)	0.0002 u	ppm	0.0023	> 100.00	140.1000	0.0002 u (ppm)
Mg (279.078 nm)	0.0001 u	ppm	0.0016	> 100.00	14.6300	0.0001 u (ppm)
Mn (259.372 nm)	0.0000	ppm	0.0000	73.19	48.4800	0.0000 (ppm)
Mo (204.598 nm)	0.0000 u	ppm	0.0014	> 100.00	-1.6860	0.0000 u (ppm)
Na (589.592 nm)	-0.0575 u	ppm	0.0196	34.09	598.1000	-0.0575 u (ppm)
Ni (231.604 nm)	0.0008	ppm	0.0000	4.45	-8.3950	0.0008 (ppm)
P (213.618 nm)	0.0014 u	ppm	0.0025	> 100.00	5.1620	0.0014 u (ppm)
Pb (220.353 nm)	0.0008 u	ppm	0.0033	> 100.00	10.2700	0.0008 u (ppm)
Sb (206.834 nm)	0.0041	ppm	0.0053	> 100.00	6.1800	0.0041 (ppm)
Se (196.026 nm)	0.0056	ppm	0.0038	68.95	4.9000	0.0056 (ppm)
Si (251.611 nm)	-0.0005 u	ppm	0.0012	> 100.00	-1.7020	-0.0005 u (ppm)
Sn (189.925 nm)	-0.0030 u	ppm	0.0000	1.08	-2.0640	-0.0030 u (ppm)
Sr (421.552 nm)	0.0001 u	ppm	0.0002	> 100.00	-12.9500	0.0001 u (ppm)
Ti (336.122 nm)	0.0007	ppm	0.0002	33.06	-85.8200	0.0007 (ppm)
Tl (190.794 nm)	0.0036	ppm	0.0006	15.67	9.4670	0.0036 (ppm)
V (292.401 nm)	-0.0001 u	ppm	0.0007	> 100.00	72.1000	-0.0001 u (ppm)
W (207.912 nm)	0.0019 u	ppm	0.0030	> 100.00	-2.7430	0.0019 u (ppm)
Zn (202.548 nm)	0.0002	ppm	0.0001	32.19	12.4700	0.0002 (ppm)
Zr (343.823 nm)	0.0000 u	ppm	0.0000	60.75	812.0000	0.0000 u (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9992	378200.0000	0.0024	0.25
Y_R 371.029	1.0130	51400.0000	0.0095	0.93

Sample Name: 440-258909-B-2-A@5

Date: 1/15/2020 1:05:21 PM

Rack:Tube: 1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0007 u	ppm	0.0002	23.98	-211.6000	-0.0007 u (ppm)
Al (396.152 nm)	44.2400	ppm	0.0966	0.22	1340000.0000	44.2400 (ppm)
As (188.980 nm)	0.0279	ppm	0.0008	3.01	7.8570	0.0279 (ppm)
B (249.678 nm)	0.0098	ppm	0.0006	6.08	-64.2900	0.0098 (ppm)
Ba (233.527 nm)	0.3148	ppm	0.0022	0.70	26980.0000	0.3148 (ppm)
Be (234.861 nm)	0.0008	ppm	0.0001	8.56	2196.0000	0.0008 (ppm)
Ca (422.673 nm)	33.0000	ppm	0.0131	0.04	128700.0000	33.0000 (ppm)
Cd (214.439 nm)	-0.0003 u	ppm	0.0002	78.42	9.8360	-0.0003 u (ppm)
Co (228.615 nm)	0.0258	ppm	0.0003	1.06	395.5000	0.0258 (ppm)
Cr (205.560 nm)	0.0774	ppm	0.0016	2.05	348.1000	0.0774 (ppm)
Cu (324.754 nm)	3.5680	ppm	0.0023	0.06	139700.0000	3.5680 (ppm)
Fe (238.204 nm)	135.0000	ppm	0.0434	0.03	340700.0000	135.0000 (ppm)
K (766.491 nm)	11.7600	ppm	0.1000	0.85	11900.0000	11.7600 (ppm)
Li (670.783 nm)	0.0263	ppm	0.0007	2.68	948.2000	0.0263 (ppm)
Mg (279.078 nm)	37.4500	ppm	0.2491	0.67	101000.0000	37.4500 (ppm)
Mn (259.372 nm)	0.3992	ppm	0.0014	0.36	51840.0000	0.3992 (ppm)
Mo (204.598 nm)	0.0231	ppm	0.0014	6.09	93.9200	0.0231 (ppm)
Na (589.592 nm)	0.8078	ppm	0.0085	1.05	6245.0000	0.8078 (ppm)
Ni (231.604 nm)	0.0565	ppm	0.0007	1.19	228.5000	0.0565 (ppm)
P (213.618 nm)	7.5860	ppm	0.0066	0.09	5567.0000	7.5860 (ppm)
Pb (220.353 nm)	0.0361	ppm	0.0005	1.26	22.3000	0.0361 (ppm)
Sb (206.834 nm)	-0.0029 u	ppm	0.0057	> 100.00	1.2980	-0.0029 u (ppm)
Se (196.026 nm)	0.0274	ppm	0.0119	43.36	-12.4400	0.0274 (ppm)
Si (251.611 nm)	0.8504	ppm	0.0094	1.11	1790.0000	0.8504 (ppm)
Sn (189.925 nm)	0.0072	ppm	0.0042	58.30	3.8190	0.0072 (ppm)
Sr (421.552 nm)	0.2295	ppm	0.0001	0.06	79730.0000	0.2295 (ppm)
Ti (336.122 nm)	2.4180	ppm	0.0042	0.17	242600.0000	2.4180 (ppm)
Tl (190.794 nm)	-0.0293 u	ppm	0.0003	0.95	-48.3500	-0.0293 u (ppm)
V (292.401 nm)	0.1801	ppm	0.0003	0.18	5666.0000	0.1801 (ppm)
W (207.912 nm)	0.0014	ppm	0.0017	> 100.00	-4.0140	0.0014 (ppm)
Zn (202.548 nm)	0.1161	ppm	0.0003	0.25	2168.0000	0.1161 (ppm)
Zr (343.823 nm)	0.0521	ppm	0.0002	0.38	2330.0000	0.0521 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9574	362400.0000	0.0038	0.39
Y_R 371.029	0.9876	50090.0000	0.0008	0.08

Sample Name: 440-258909-B-3-A@5

Date: 1/15/2020 1:07:33 PM

Rack:Tube: 1:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0005 u	ppm	0.0000	1.94	-146.9000	-0.0005 u (ppm)
Al (396.152 nm)	47.9600	ppm	0.1014	0.21	1453000.0000	47.9600 (ppm)
As (188.980 nm)	0.0203	ppm	0.0013	6.58	5.3440	0.0203 (ppm)
B (249.678 nm)	0.0054	ppm	0.0002	3.09	-68.9300	0.0054 (ppm)
Ba (233.527 nm)	0.3578	ppm	0.0017	0.49	30650.0000	0.3578 (ppm)
Be (234.861 nm)	0.0019	ppm	0.0000	2.28	1790.0000	0.0019 (ppm)
Ca (422.673 nm)	44.6700	ppm	0.0749	0.17	174200.0000	44.6700 (ppm)
Cd (214.439 nm)	-0.0002 u	ppm	0.0001	34.20	5.5120	-0.0002 u (ppm)
Co (228.615 nm)	0.0537	ppm	0.0005	0.94	776.6000	0.0537 (ppm)
Cr (205.560 nm)	0.0753	ppm	0.0005	0.71	339.2000	0.0753 (ppm)
Cu (324.754 nm)	8.4000	ppm	0.0007	0.01	328600.0000	8.4000 (ppm)
Fe (238.204 nm)	97.0500	ppm	0.0980	0.10	244900.0000	97.0500 (ppm)
K (766.491 nm)	13.8600	ppm	0.0429	0.31	14040.0000	13.8600 (ppm)
Li (670.783 nm)	0.0296	ppm	0.0013	4.45	1106.0000	0.0296 (ppm)
Mg (279.078 nm)	45.5100	ppm	0.2663	0.59	122800.0000	45.5100 (ppm)
Mn (259.372 nm)	0.9658	ppm	0.0021	0.21	100000.0000	0.9658 (ppm)
Mo (204.598 nm)	0.0197	ppm	0.0013	6.44	80.8100	0.0197 (ppm)
Na (589.592 nm)	0.2217	ppm	0.0232	10.46	2875.0000	0.2217 (ppm)
Ni (231.604 nm)	0.1034	ppm	0.0007	0.63	435.4000	0.1034 (ppm)
P (213.618 nm)	5.7340	ppm	0.0696	1.21	4050.0000	5.7340 (ppm)
Pb (220.353 nm)	0.0219	ppm	0.0048	21.88	8.8080	0.0219 (ppm)
Sb (206.834 nm)	-0.0069 u	ppm	0.0026	36.79	-1.7420	-0.0069 u (ppm)
Se (196.026 nm)	0.0112	ppm	0.0103	91.79	-14.1300	0.0112 (ppm)
Si (251.611 nm)	0.7895	ppm	0.0018	0.23	1678.0000	0.7895 (ppm)
Sn (189.925 nm)	0.0003 u	ppm	0.0014	> 100.00	-0.1813	0.0003 u (ppm)
Sr (421.552 nm)	0.1472	ppm	0.0001	0.04	51370.0000	0.1472 (ppm)
Ti (336.122 nm)	3.4170	ppm	0.0047	0.14	342900.0000	3.4170 (ppm)
Tl (190.794 nm)	-0.0330 u	ppm	0.0021	6.38	-66.7400	-0.0330 u (ppm)
V (292.401 nm)	0.1563	ppm	0.0001	0.09	4991.0000	0.1563 (ppm)
W (207.912 nm)	0.0006 u	ppm	0.0016	> 100.00	-4.6460	0.0006 u (ppm)
Zn (202.548 nm)	0.1458	ppm	0.0006	0.39	3224.0000	0.1458 (ppm)
Zr (343.823 nm)	0.0434	ppm	0.0000	0.07	2385.0000	0.0434 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9606	363600.0000	0.0009	0.09
Y_R 371.029	0.9879	50110.0000	0.0078	0.79

Sample Name: 440-258909-B-4-A@5

Date: 1/15/2020 1:09:45 PM

Rack:Tube: 1:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0010 u	ppm	0.0001	15.11	-163.8000	-0.0010 u (ppm)
Al (396.152 nm)	54.6300	ppm	0.1931	0.35	1655000.0000	54.6300 (ppm)
As (188.980 nm)	0.0117	ppm	0.0043	36.67	0.2903	0.0117 (ppm)
B (249.678 nm)	0.0089	ppm	0.0006	6.53	-22.6200	0.0089 (ppm)
Ba (233.527 nm)	0.4063	ppm	0.0026	0.63	34800.0000	0.4063 (ppm)
Be (234.861 nm)	0.0015	ppm	0.0000	0.14	1640.0000	0.0015 (ppm)
Ca (422.673 nm)	53.6500	ppm	0.0934	0.17	209200.0000	53.6500 (ppm)
Cd (214.439 nm)	-0.0002 u	ppm	0.0002	> 100.00	4.9320	-0.0002 u (ppm)
Co (228.615 nm)	0.0321	ppm	0.0002	0.61	536.9000	0.0321 (ppm)
Cr (205.560 nm)	0.0720	ppm	0.0012	1.67	323.8000	0.0720 (ppm)
Cu (324.754 nm)	3.2990	ppm	0.0000	0.00	129200.0000	3.2990 (ppm)
Fe (238.204 nm)	91.2300	ppm	0.2363	0.26	230200.0000	91.2300 (ppm)
K (766.491 nm)	15.5200	ppm	0.1389	0.89	15740.0000	15.5200 (ppm)
Li (670.783 nm)	0.0242	ppm	0.0008	3.18	1259.0000	0.0242 (ppm)
Mg (279.078 nm)	53.0800	ppm	0.3493	0.66	143300.0000	53.0800 (ppm)
Mn (259.372 nm)	0.5822	ppm	0.0027	0.46	64000.0000	0.5822 (ppm)
Mo (204.598 nm)	0.0124	ppm	0.0014	11.49	53.5000	0.0124 (ppm)
Na (589.592 nm)	0.5945	ppm	0.0068	1.14	4788.0000	0.5945 (ppm)
Ni (231.604 nm)	0.0665	ppm	0.0005	0.73	274.3000	0.0665 (ppm)
P (213.618 nm)	6.6510	ppm	0.0122	0.18	4877.0000	6.6510 (ppm)
Pb (220.353 nm)	0.0201	ppm	0.0026	13.02	5.4950	0.0201 (ppm)
Sb (206.834 nm)	-0.0028 u	ppm	0.0061	> 100.00	2.1000	-0.0028 u (ppm)
Se (196.026 nm)	0.0113	ppm	0.0014	12.36	-12.6900	0.0113 (ppm)
Si (251.611 nm)	0.8944	ppm	0.0001	0.01	1911.0000	0.8944 (ppm)
Sn (189.925 nm)	-0.0046 u	ppm	0.0049	> 100.00	-3.1840	-0.0046 u (ppm)
Sr (421.552 nm)	0.2909	ppm	0.0005	0.17	101100.0000	0.2909 (ppm)
Ti (336.122 nm)	5.1970	ppm	0.0196	0.38	521600.0000	5.1970 (ppm)
Tl (190.794 nm)	-0.0483 u	ppm	0.0059	12.12	-107.3000	-0.0483 u (ppm)
V (292.401 nm)	0.1919	ppm	0.0008	0.40	6138.0000	0.1919 (ppm)
W (207.912 nm)	-0.0001 u	ppm	0.0025	> 100.00	-6.5980	-0.0001 u (ppm)
Zn (202.548 nm)	0.1107	ppm	0.0005	0.43	2076.0000	0.1107 (ppm)
Zr (343.823 nm)	0.0423	ppm	0.0004	0.91	2410.0000	0.0423 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9545	361300.0000	0.0009	0.10
Y_R 371.029	0.9885	50140.0000	0.0031	0.32

Sample Name: 440-258909-B-6-A@5

Date: 1/15/2020 1:11:57 PM

Rack:Tube: 1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0007 u	ppm	0.0001	9.45	-336.0000	-0.0007 u (ppm)
Al (396.152 nm)	59.6300	ppm	0.1306	0.22	1807000.0000	59.6300 (ppm)
As (188.980 nm)	0.0460	ppm	0.0004	0.78	15.0100	0.0460 (ppm)
B (249.678 nm)	0.0160	ppm	0.0005	3.38	-86.3600	0.0160 (ppm)
Ba (233.527 nm)	0.3315	ppm	0.0003	0.09	28400.0000	0.3315 (ppm)
Be (234.861 nm)	0.0015	ppm	0.0004	29.51	3448.0000	0.0015 (ppm)
Ca (422.673 nm)	46.7900	ppm	0.0357	0.08	182500.0000	46.7900 (ppm)
Cd (214.439 nm)	0.0000 u	ppm	0.0000	94.59	27.7800	0.0000 u (ppm)
Co (228.615 nm)	0.0196	ppm	0.0000	0.07	331.9000	0.0196 (ppm)
Cr (205.560 nm)	0.0567	ppm	0.0003	0.55	257.9000	0.0567 (ppm)
Cu (324.754 nm)	4.5080	ppm	0.0119	0.26	176500.0000	4.5080 (ppm)
Fe (238.204 nm)	211.1000	ppm	0.4710	0.22	532700.0000	211.1000 (ppm)
K (766.491 nm)	11.6600	ppm	0.0792	0.68	11820.0000	11.6600 (ppm)
Li (670.783 nm)	0.0648	ppm	0.0005	0.74	2739.0000	0.0648 (ppm)
Mg (279.078 nm)	38.6100	ppm	0.0527	0.14	104100.0000	38.6100 (ppm)
Mn (259.372 nm)	0.3517	ppm	0.0017	0.48	55760.0000	0.3517 (ppm)
Mo (204.598 nm)	0.0375	ppm	0.0005	1.29	152.1000	0.0375 (ppm)
Na (589.592 nm)	10.6100	ppm	0.0328	0.31	58500.0000	10.6100 (ppm)
Ni (231.604 nm)	0.0448	ppm	0.0008	1.74	173.3000	0.0448 (ppm)
P (213.618 nm)	6.2640	ppm	0.0604	0.96	4558.0000	6.2640 (ppm)
Pb (220.353 nm)	0.0689	ppm	0.0026	3.72	55.5600	0.0689 (ppm)
Sb (206.834 nm)	0.0061	ppm	0.0074	> 100.00	9.1340	0.0061 (ppm)
Se (196.026 nm)	0.0275	ppm	0.0166	60.52	-29.4100	0.0275 (ppm)
Si (251.611 nm)	0.8811	ppm	0.0104	1.18	1853.0000	0.8811 (ppm)
Sn (189.925 nm)	0.0334	ppm	0.0034	10.27	18.9000	0.0334 (ppm)
Sr (421.552 nm)	1.0320	ppm	0.0016	0.15	357200.0000	1.0320 (ppm)
Ti (336.122 nm)	2.7870	ppm	0.0065	0.23	279600.0000	2.7870 (ppm)
Tl (190.794 nm)	-0.0382 u	ppm	0.0005	1.27	-55.7800	-0.0382 u (ppm)
V (292.401 nm)	0.1627	ppm	0.0005	0.32	5152.0000	0.1627 (ppm)
W (207.912 nm)	0.0008	ppm	0.0008	89.87	-6.4190	0.0008 (ppm)
Zn (202.548 nm)	0.0754	ppm	0.0012	1.60	1616.0000	0.0754 (ppm)
Zr (343.823 nm)	0.0717	ppm	0.0001	0.14	2403.0000	0.0717 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9508	359900.0000	0.0003	0.03
Y_R 371.029	0.9833	49880.0000	0.0017	0.17

Sample Name: 440-258909-B-7-A@5

Date: 1/15/2020 1:14:09 PM

Rack:Tube: 1:5

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0013 u	ppm	0.0005	37.31	-434.1000	-0.0013 u (ppm)
Al (396.152 nm)	48.0100	ppm	0.0681	0.14	1455000.0000	48.0100 (ppm)
As (188.980 nm)	0.0417	ppm	0.0064	15.31	9.7530	0.0417 (ppm)
B (249.678 nm)	0.0172	ppm	0.0001	0.56	-126.0000	0.0172 (ppm)
Ba (233.527 nm)	0.3094	ppm	0.0017	0.54	26520.0000	0.3094 (ppm)
Be (234.861 nm)	0.0015	ppm	0.0002	14.52	4144.0000	0.0015 (ppm)
Ca (422.673 nm)	52.7900	ppm	0.0508	0.10	205900.0000	52.7900 (ppm)
Cd (214.439 nm)	-0.0001 u	ppm	0.0000	24.46	34.2100	-0.0001 u (ppm)
Co (228.615 nm)	0.0159	ppm	0.0009	5.59	294.1000	0.0159 (ppm)
Cr (205.560 nm)	0.0617	ppm	0.0000	0.03	280.7000	0.0617 (ppm)
Cu (324.754 nm)	3.0880	ppm	0.0079	0.26	120900.0000	3.0880 (ppm)
Fe (238.204 nm)	256.2000	ppm	0.0661	0.03	646700.0000	256.2000 (ppm)
K (766.491 nm)	14.8200	ppm	0.0491	0.33	15050.0000	14.8200 (ppm)
Li (670.783 nm)	0.0443	ppm	0.0009	2.00	1361.0000	0.0443 (ppm)
Mg (279.078 nm)	33.2500	ppm	0.2110	0.63	89630.0000	33.2500 (ppm)
Mn (259.372 nm)	0.2897	ppm	0.0013	0.44	54980.0000	0.2897 (ppm)
Mo (204.598 nm)	0.0500	ppm	0.0001	0.16	199.9000	0.0500 (ppm)
Na (589.592 nm)	14.8500	ppm	0.0000	0.00	81220.0000	14.8500 (ppm)
Ni (231.604 nm)	0.0399	ppm	0.0008	1.97	150.0000	0.0399 (ppm)
P (213.618 nm)	8.3240	ppm	0.0222	0.27	6136.0000	8.3240 (ppm)
Pb (220.353 nm)	0.0763	ppm	0.0003	0.35	52.7500	0.0763 (ppm)
Sb (206.834 nm)	-0.0079 u	ppm	0.0113	> 100.00	-3.4520	-0.0079 u (ppm)
Se (196.026 nm)	0.0331	ppm	0.0189	57.12	-36.0200	0.0331 (ppm)
Si (251.611 nm)	0.8001	ppm	0.0042	0.53	1681.0000	0.8001 (ppm)
Sn (189.925 nm)	0.0605	ppm	0.0059	9.69	34.4600	0.0605 (ppm)
Sr (421.552 nm)	1.1110	ppm	0.0004	0.04	384900.0000	1.1110 (ppm)
Ti (336.122 nm)	3.0030	ppm	0.0046	0.15	301300.0000	3.0030 (ppm)
Tl (190.794 nm)	-0.0343 u	ppm	0.0010	2.83	-50.4300	-0.0343 u (ppm)
V (292.401 nm)	0.1701	ppm	0.0004	0.23	5378.0000	0.1701 (ppm)
W (207.912 nm)	0.0036	ppm	0.0024	65.28	-2.4140	0.0036 (ppm)
Zn (202.548 nm)	0.0681	ppm	0.0001	0.19	1307.0000	0.0681 (ppm)
Zr (343.823 nm)	0.0861	ppm	0.0001	0.09	2668.0000	0.0861 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9486	359000.0000	0.0012	0.13
Y_R 371.029	0.9862	50020.0000	0.0031	0.32

Sample Name: 440-258909-B-8-A@5

Date: 1/15/2020 1:16:21 PM

Rack:Tube: 1:6

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0007 u	ppm	0.0000	1.27	-203.4000	-0.0007 u (ppm)
Al (396.152 nm)	46.2400	ppm	0.0166	0.04	1401000.0000	46.2400 (ppm)
As (188.980 nm)	0.0180	ppm	0.0022	12.06	2.1630	0.0180 (ppm)
B (249.678 nm)	0.0135	ppm	0.0005	3.40	-13.5800	0.0135 (ppm)
Ba (233.527 nm)	0.4075	ppm	0.0038	0.93	34900.0000	0.4075 (ppm)
Be (234.861 nm)	0.0006	ppm	0.0001	12.74	2033.0000	0.0006 (ppm)
Ca (422.673 nm)	42.2200	ppm	0.0744	0.18	164700.0000	42.2200 (ppm)
Cd (214.439 nm)	-0.0001 u	ppm	0.0001	> 100.00	12.9800	-0.0001 u (ppm)
Co (228.615 nm)	0.0186	ppm	0.0004	1.99	334.4000	0.0186 (ppm)
Cr (205.560 nm)	0.0828	ppm	0.0004	0.52	371.7000	0.0828 (ppm)
Cu (324.754 nm)	1.0000	ppm	0.0026	0.26	39300.0000	1.0000 (ppm)
Fe (238.204 nm)	126.1000	ppm	0.3188	0.25	318200.0000	126.1000 (ppm)
K (766.491 nm)	15.1400	ppm	0.1179	0.78	15360.0000	15.1400 (ppm)
Li (670.783 nm)	0.0244	ppm	0.0006	2.49	1106.0000	0.0244 (ppm)
Mg (279.078 nm)	40.2700	ppm	0.3342	0.83	108600.0000	40.2700 (ppm)
Mn (259.372 nm)	0.3291	ppm	0.0001	0.04	44410.0000	0.3291 (ppm)
Mo (204.598 nm)	0.0295	ppm	0.0006	2.06	118.9000	0.0295 (ppm)
Na (589.592 nm)	1.0870	ppm	0.0134	1.23	7644.0000	1.0870 (ppm)
Ni (231.604 nm)	0.0524	ppm	0.0012	2.22	211.3000	0.0524 (ppm)
P (213.618 nm)	8.6400	ppm	0.0135	0.16	6425.0000	8.6400 (ppm)
Pb (220.353 nm)	0.0281	ppm	0.0019	6.83	8.5200	0.0281 (ppm)
Sb (206.834 nm)	-0.0044 u	ppm	0.0017	38.42	0.1027	-0.0044 u (ppm)
Se (196.026 nm)	0.0138	ppm	0.0036	26.34	-18.7400	0.0138 (ppm)
Si (251.611 nm)	0.9705	ppm	0.0006	0.06	2052.0000	0.9705 (ppm)
Sn (189.925 nm)	0.0373	ppm	0.0030	8.14	21.0500	0.0373 (ppm)
Sr (421.552 nm)	0.2591	ppm	0.0004	0.16	90020.0000	0.2591 (ppm)
Ti (336.122 nm)	3.8240	ppm	0.0011	0.03	383800.0000	3.8240 (ppm)
Tl (190.794 nm)	-0.0419 u	ppm	0.0008	1.98	-81.3300	-0.0419 u (ppm)
V (292.401 nm)	0.2215	ppm	0.0003	0.16	6978.0000	0.2215 (ppm)
W (207.912 nm)	-0.0014 u	ppm	0.0003	19.83	-8.9440	-0.0014 u (ppm)
Zn (202.548 nm)	0.1032	ppm	0.0000	0.04	1666.0000	0.1032 (ppm)
Zr (343.823 nm)	0.0512	ppm	0.0006	1.09	2435.0000	0.0512 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9582	362700.0000	0.0037	0.38
Y_R 371.029	0.9880	50110.0000	0.0050	0.51

Sample Name: 440-258909-B-9-A@5

Date: 1/15/2020 1:18:33 PM

Rack:Tube: 1:7

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0004 u	ppm	0.0001	33.31	-121.3000	-0.0004 u (ppm)
Al (396.152 nm)	56.7300	ppm	0.0005	0.00	1719000.0000	56.7300 (ppm)
As (188.980 nm)	0.0199	ppm	0.0121	60.87	5.9530	0.0199 (ppm)
B (249.678 nm)	0.0091	ppm	0.0014	15.40	-14.1100	0.0091 (ppm)
Ba (233.527 nm)	0.3333	ppm	0.0001	0.03	28550.0000	0.3333 (ppm)
Be (234.861 nm)	0.0020	ppm	0.0001	3.15	1622.0000	0.0020 (ppm)
Ca (422.673 nm)	34.6300	ppm	0.1011	0.29	135100.0000	34.6300 (ppm)
Cd (214.439 nm)	0.0000 u	ppm	0.0001	> 100.00	7.2350	0.0000 u (ppm)
Co (228.615 nm)	0.0287	ppm	0.0004	1.28	444.2000	0.0287 (ppm)
Cr (205.560 nm)	0.0690	ppm	0.0008	1.09	310.8000	0.0690 (ppm)
Cu (324.754 nm)	7.2930	ppm	0.0074	0.10	285300.0000	7.2930 (ppm)
Fe (238.204 nm)	84.4200	ppm	0.2232	0.26	213000.0000	84.4200 (ppm)
K (766.491 nm)	11.0500	ppm	0.0416	0.38	11180.0000	11.0500 (ppm)
Li (670.783 nm)	0.0311	ppm	0.0002	0.50	1351.0000	0.0311 (ppm)
Mg (279.078 nm)	42.9900	ppm	0.0308	0.07	116000.0000	42.9900 (ppm)
Mn (259.372 nm)	0.4065	ppm	0.0000	0.00	47000.0000	0.4065 (ppm)
Mo (204.598 nm)	0.0161	ppm	0.0007	4.25	67.3700	0.0161 (ppm)
Na (589.592 nm)	0.4759	ppm	0.0059	1.23	4112.0000	0.4759 (ppm)
Ni (231.604 nm)	0.0599	ppm	0.0030	5.05	245.5000	0.0599 (ppm)
P (213.618 nm)	5.3380	ppm	0.0680	1.27	3785.0000	5.3380 (ppm)
Pb (220.353 nm)	0.0190	ppm	0.0023	12.23	7.3460	0.0190 (ppm)
Sb (206.834 nm)	0.0005 u	ppm	0.0043	> 100.00	4.7640	0.0005 u (ppm)
Se (196.026 nm)	0.0098	ppm	0.0057	57.63	-12.2300	0.0098 (ppm)
Si (251.611 nm)	0.8850	ppm	0.0028	0.32	1874.0000	0.8850 (ppm)
Sn (189.925 nm)	0.0007	ppm	0.0002	31.02	0.0930	0.0007 (ppm)
Sr (421.552 nm)	0.2034	ppm	0.0002	0.12	70700.0000	0.2034 (ppm)
Ti (336.122 nm)	3.0980	ppm	0.0014	0.05	310900.0000	3.0980 (ppm)
Tl (190.794 nm)	-0.0308 u	ppm	0.0001	0.26	-62.5200	-0.0308 u (ppm)
V (292.401 nm)	0.1646	ppm	0.0002	0.13	5225.0000	0.1646 (ppm)
W (207.912 nm)	0.0038 u	ppm	0.0064	> 100.00	0.1250	0.0038 u (ppm)
Zn (202.548 nm)	0.1062	ppm	0.0003	0.26	2489.0000	0.1062 (ppm)
Zr (343.823 nm)	0.0377	ppm	0.0004	1.17	2170.0000	0.0377 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9581	362600.0000	0.0028	0.29
Y_R 371.029	0.9910	50270.0000	0.0031	0.32

Sample Name: 440-258909-B-10-A@5

Date: 1/15/2020 1:20:45 PM

Rack:Tube: 1:8

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0006 u	ppm	0.0002	35.81	-144.3000	-0.0006 u (ppm)
Al (396.152 nm)	63.7000	ppm	0.1057	0.17	1930000.0000	63.7000 (ppm)
As (188.980 nm)	0.0151	ppm	0.0083	54.63	2.4460	0.0151 (ppm)
B (249.678 nm)	0.0118	ppm	0.0004	3.72	5.3110	0.0118 (ppm)
Ba (233.527 nm)	0.3662	ppm	0.0014	0.37	31360.0000	0.3662 (ppm)
Be (234.861 nm)	0.0020	ppm	0.0000	1.52	1739.0000	0.0020 (ppm)
Ca (422.673 nm)	35.9800	ppm	0.2425	0.67	140300.0000	35.9800 (ppm)
Cd (214.439 nm)	0.0000 u	ppm	0.0002	> 100.00	8.3230	0.0000 u (ppm)
Co (228.615 nm)	0.0305	ppm	0.0001	0.41	480.7000	0.0305 (ppm)
Cr (205.560 nm)	0.0858	ppm	0.0005	0.55	385.4000	0.0858 (ppm)
Cu (324.754 nm)	5.7230	ppm	0.0591	1.03	224000.0000	5.7230 (ppm)
Fe (238.204 nm)	92.4200	ppm	0.6731	0.73	233200.0000	92.4200 (ppm)
K (766.491 nm)	12.5000	ppm	0.0644	0.52	12660.0000	12.5000 (ppm)
Li (670.783 nm)	0.0358	ppm	0.0001	0.15	1715.0000	0.0358 (ppm)
Mg (279.078 nm)	46.5600	ppm	0.1434	0.31	125700.0000	46.5600 (ppm)
Mn (259.372 nm)	0.4601	ppm	0.0008	0.18	52860.0000	0.4601 (ppm)
Mo (204.598 nm)	0.0183	ppm	0.0004	1.97	76.8000	0.0183 (ppm)
Na (589.592 nm)	0.5717	ppm	0.0311	5.44	4680.0000	0.5717 (ppm)
Ni (231.604 nm)	0.0641	ppm	0.0010	1.53	263.8000	0.0641 (ppm)
P (213.618 nm)	6.0310	ppm	0.0875	1.45	4346.0000	6.0310 (ppm)
Pb (220.353 nm)	0.0203	ppm	0.0002	0.86	5.7810	0.0203 (ppm)
Sb (206.834 nm)	0.0032 u	ppm	0.0065	> 100.00	7.3580	0.0032 u (ppm)
Se (196.026 nm)	0.0100	ppm	0.0042	42.08	-13.9100	0.0100 (ppm)
Si (251.611 nm)	0.8885	ppm	0.0011	0.13	1885.0000	0.8885 (ppm)
Sn (189.925 nm)	0.0031	ppm	0.0040	> 100.00	1.3870	0.0031 (ppm)
Sr (421.552 nm)	0.2427	ppm	0.0012	0.48	84280.0000	0.2427 (ppm)
Ti (336.122 nm)	3.6290	ppm	0.0037	0.10	364200.0000	3.6290 (ppm)
Tl (190.794 nm)	-0.0343 u	ppm	0.0029	8.34	-72.5900	-0.0343 u (ppm)
V (292.401 nm)	0.1941	ppm	0.0004	0.23	6141.0000	0.1941 (ppm)
W (207.912 nm)	0.0014 u	ppm	0.0025	> 100.00	-3.7990	0.0014 u (ppm)
Zn (202.548 nm)	0.1145	ppm	0.0006	0.51	2427.0000	0.1145 (ppm)
Zr (343.823 nm)	0.0390	ppm	0.0002	0.49	2114.0000	0.0390 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9613	363800.0000	0.0005	0.05
Y_R 371.029	0.9866	50040.0000	0.0022	0.22

Sample Name: 440-258909-B-11-A@5

Date: 1/15/2020 1:22:57 PM

Rack:Tube: 1:9

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0001 u	ppm	0.0002	> 100.00	-149.9000	-0.0001 u (ppm)
Al (396.152 nm)	48.7400	ppm	0.0931	0.19	1477000.0000	48.7400 (ppm)
As (188.980 nm)	0.0663	ppm	0.0025	3.72	32.8100	0.0663 (ppm)
B (249.678 nm)	0.0118	ppm	0.0001	0.85	-17.2500	0.0118 (ppm)
Ba (233.527 nm)	0.3852	ppm	0.0007	0.19	32980.0000	0.3852 (ppm)
Be (234.861 nm)	0.0010	ppm	0.0002	18.02	1867.0000	0.0010 (ppm)
Ca (422.673 nm)	22.8200	ppm	0.0820	0.36	89020.0000	22.8200 (ppm)
Cd (214.439 nm)	-0.0001 u	ppm	0.0002	> 100.00	9.4320	-0.0001 u (ppm)
Co (228.615 nm)	0.0196	ppm	0.0001	0.59	306.2000	0.0196 (ppm)
Cr (205.560 nm)	0.0490	ppm	0.0005	0.95	222.0000	0.0490 (ppm)
Cu (324.754 nm)	5.8400	ppm	0.0041	0.07	228500.0000	5.8400 (ppm)
Fe (238.204 nm)	111.6000	ppm	0.2539	0.23	281500.0000	111.6000 (ppm)
K (766.491 nm)	8.7080	ppm	0.0691	0.79	8788.0000	8.7080 (ppm)
Li (670.783 nm)	0.0300	ppm	0.0000	0.04	1149.0000	0.0300 (ppm)
Mg (279.078 nm)	36.3200	ppm	0.0819	0.23	98010.0000	36.3200 (ppm)
Mn (259.372 nm)	0.3416	ppm	0.0006	0.17	43990.0000	0.3416 (ppm)
Mo (204.598 nm)	0.0234	ppm	0.0001	0.49	95.2200	0.0234 (ppm)
Na (589.592 nm)	0.3732	ppm	0.0046	1.24	3776.0000	0.3732 (ppm)
Ni (231.604 nm)	0.0477	ppm	0.0014	2.99	190.8000	0.0477 (ppm)
P (213.618 nm)	2.6240	ppm	0.0219	0.84	1802.0000	2.6240 (ppm)
Pb (220.353 nm)	0.0430	ppm	0.0019	4.53	45.0100	0.0430 (ppm)
Sb (206.834 nm)	0.0148	ppm	0.0005	3.15	16.7800	0.0148 (ppm)
Se (196.026 nm)	0.0536	ppm	0.0090	16.86	8.5550	0.0536 (ppm)
Si (251.611 nm)	0.9132	ppm	0.0049	0.54	1921.0000	0.9132 (ppm)
Sn (189.925 nm)	0.0029	ppm	0.0028	95.59	1.3690	0.0029 (ppm)
Sr (421.552 nm)	0.3734	ppm	0.0014	0.38	129300.0000	0.3734 (ppm)
Ti (336.122 nm)	2.1190	ppm	0.0019	0.09	212600.0000	2.1190 (ppm)
Tl (190.794 nm)	-0.0227 u	ppm	0.0073	31.95	-38.5700	-0.0227 u (ppm)
V (292.401 nm)	0.1414	ppm	0.0000	0.01	4469.0000	0.1414 (ppm)
W (207.912 nm)	0.0050	ppm	0.0022	43.58	1.9500	0.0050 (ppm)
Zn (202.548 nm)	0.0898	ppm	0.0006	0.69	2050.0000	0.0898 (ppm)
Zr (343.823 nm)	0.0425	ppm	0.0002	0.56	2018.0000	0.0425 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9642	364900.0000	0.0010	0.11
Y_R 371.029	0.9888	50160.0000	0.0023	0.24

Sample Name: 440-258909-B-12-A@5

Date: 1/15/2020 1:25:09 PM

Rack:Tube: 1:10

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0001 u	ppm	0.0002	> 100.00	-209.2000	-0.0001 u (ppm)
Al (396.152 nm)	41.8300	ppm	0.0579	0.14	1268000.0000	41.8300 (ppm)
As (188.980 nm)	0.0296	ppm	0.0041	14.00	8.0960	0.0296 (ppm)
B (249.678 nm)	0.0105	ppm	0.0000	0.37	-70.7300	0.0105 (ppm)
Ba (233.527 nm)	0.3399	ppm	0.0014	0.43	29120.0000	0.3399 (ppm)
Be (234.861 nm)	0.0003	ppm	0.0001	30.28	2300.0000	0.0003 (ppm)
Ca (422.673 nm)	33.7900	ppm	0.0212	0.06	131800.0000	33.7900 (ppm)
Cd (214.439 nm)	-0.0004 u	ppm	0.0002	51.64	9.8800	-0.0004 u (ppm)
Co (228.615 nm)	0.0189	ppm	0.0009	5.01	321.6000	0.0189 (ppm)
Cr (205.560 nm)	0.0907	ppm	0.0002	0.27	407.2000	0.0907 (ppm)
Cu (324.754 nm)	2.9140	ppm	0.0039	0.13	114100.0000	2.9140 (ppm)
Fe (238.204 nm)	146.5000	ppm	0.2102	0.14	369800.0000	146.5000 (ppm)
K (766.491 nm)	12.5100	ppm	0.0368	0.29	12670.0000	12.5100 (ppm)
Li (670.783 nm)	0.0262	ppm	0.0015	5.55	926.3000	0.0262 (ppm)
Mg (279.078 nm)	37.4200	ppm	0.1539	0.41	101000.0000	37.4200 (ppm)
Mn (259.372 nm)	0.3359	ppm	0.0003	0.10	47310.0000	0.3359 (ppm)
Mo (204.598 nm)	0.0293	ppm	0.0002	0.70	117.9000	0.0293 (ppm)
Na (589.592 nm)	0.8844	ppm	0.0054	0.61	6740.0000	0.8844 (ppm)
Ni (231.604 nm)	0.0484	ppm	0.0005	0.96	192.6000	0.0484 (ppm)
P (213.618 nm)	12.7600	ppm	0.0221	0.17	9446.0000	12.7600 (ppm)
Pb (220.353 nm)	0.0402	ppm	0.0007	1.71	25.1700	0.0402 (ppm)
Sb (206.834 nm)	-0.0002 u	ppm	0.0067	> 100.00	3.7590	-0.0002 u (ppm)
Se (196.026 nm)	0.0180	ppm	0.0089	49.55	-20.7900	0.0180 (ppm)
Si (251.611 nm)	0.8308	ppm	0.0010	0.12	1753.0000	0.8308 (ppm)
Sn (189.925 nm)	0.0250	ppm	0.0013	5.26	14.0300	0.0250 (ppm)
Sr (421.552 nm)	0.2295	ppm	0.0003	0.12	79720.0000	0.2295 (ppm)
Ti (336.122 nm)	3.0310	ppm	0.0005	0.01	304200.0000	3.0310 (ppm)
Tl (190.794 nm)	-0.0319 u	ppm	0.0037	11.65	-58.0400	-0.0319 u (ppm)
V (292.401 nm)	0.1968	ppm	0.0010	0.50	6190.0000	0.1968 (ppm)
W (207.912 nm)	0.0035	ppm	0.0011	32.11	-0.9659	0.0035 (ppm)
Zn (202.548 nm)	0.1029	ppm	0.0001	0.13	1881.0000	0.1029 (ppm)
Zr (343.823 nm)	0.0560	ppm	0.0004	0.79	2402.0000	0.0560 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029

Label	Internal Standard
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

**Internal Standards Results**

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9619	364100.0000	0.0016	0.16
Y_R 371.029	0.9790	49660.0000	0.0030	0.31

Sample Name: CCV 6043773

Date: 1/15/2020 1:31:53 PM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.5041	ppm	0.0014	0.28	20340.0000	0.5041 (ppm)
Al (396.152 nm)	1.0170	ppm	0.0002	0.02	31610.0000	1.0170 (ppm)
As (188.980 nm)	1.0120	ppm	0.0087	0.86	607.1000	1.0120 (ppm)
B (249.678 nm)	1.0160	ppm	0.0018	0.17	10740.0000	1.0160 (ppm)
Ba (233.527 nm)	1.0110	ppm	0.0046	0.46	86450.0000	1.0110 (ppm)
Be (234.861 nm)	1.0130	ppm	0.0021	0.21	159000.0000	1.0130 (ppm)
Ca (422.673 nm)	5.0450	ppm	0.0194	0.38	19750.0000	5.0450 (ppm)
Cd (214.439 nm)	1.0150	ppm	0.0029	0.29	21910.0000	1.0150 (ppm)
Co (228.615 nm)	1.0120	ppm	0.0012	0.12	13080.0000	1.0120 (ppm)
Cr (205.560 nm)	1.0140	ppm	0.0022	0.21	4499.0000	1.0140 (ppm)
Cu (324.754 nm)	1.0170	ppm	0.0014	0.14	39920.0000	1.0170 (ppm)
Fe (238.204 nm)	1.0400	ppm	0.0032	0.31	2568.0000	1.0400 (ppm)
K (766.491 nm)	10.0700	ppm	0.1896	1.88	10150.0000	10.0700 (ppm)
Li (670.783 nm)	1.0060	ppm	0.0019	0.19	57310.0000	1.0060 (ppm)
Mg (279.078 nm)	5.0800	ppm	0.0219	0.43	13730.0000	5.0800 (ppm)
Mn (259.372 nm)	1.0120	ppm	0.0018	0.18	94130.0000	1.0120 (ppm)
Mo (204.598 nm)	1.0180	ppm	0.0026	0.26	3921.0000	1.0180 (ppm)
Na (589.592 nm)	9.9700	ppm	0.0060	0.06	53530.0000	9.9700 (ppm)
Ni (231.604 nm)	1.0180	ppm	0.0004	0.04	4455.0000	1.0180 (ppm)
P (213.618 nm)	1.0070	ppm	0.0051	0.51	710.8000	1.0070 (ppm)
Pb (220.353 nm)	1.0160	ppm	0.0067	0.66	2014.0000	1.0160 (ppm)
Sb (206.834 nm)	1.0240	ppm	0.0170	1.66	898.2000	1.0240 (ppm)
Se (196.026 nm)	1.0130	ppm	0.0023	0.23	623.5000	1.0130 (ppm)
Si (251.611 nm)	5.0750	ppm	0.0575	1.13	10740.0000	5.0750 (ppm)
Sn (189.925 nm)	1.0130	ppm	0.0053	0.52	584.0000	1.0130 (ppm)
Sr (421.552 nm)	1.0080	ppm	0.0019	0.19	348600.0000	1.0080 (ppm)
Ti (336.122 nm)	1.0270	ppm	0.0059	0.57	102900.0000	1.0270 (ppm)
Tl (190.794 nm)	1.0170	ppm	0.0076	0.75	1101.0000	1.0170 (ppm)
V (292.401 nm)	1.0120	ppm	0.0021	0.21	30750.0000	1.0120 (ppm)
W (207.912 nm)	1.0200	ppm	0.0010	0.09	1666.0000	1.0200 (ppm)
Zn (202.548 nm)	1.0150	ppm	0.0026	0.26	15740.0000	1.0150 (ppm)
Zr (343.823 nm)	0.9933	ppm	0.0078	0.78	81150.0000	0.9933 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9842	372500.0000	0.0014	0.14
Y_R 371.029	1.0000	50740.0000	0.0038	0.38

Sample Name: CCB 6043772

Date: 1/15/2020 1:36:33 PM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0001 u	ppm	0.0001	> 100.00	43.6800	-0.0001 u (ppm)
Al (396.152 nm)	0.0002	ppm	0.0003	> 100.00	-318.1000	0.0002 (ppm)
As (188.980 nm)	0.0038	ppm	0.0035	92.73	0.9563	0.0038 (ppm)
B (249.678 nm)	0.0008	ppm	0.0005	63.93	-4.2770	0.0008 (ppm)
Ba (233.527 nm)	0.0001	ppm	0.0000	4.32	70.5300	0.0001 (ppm)
Be (234.861 nm)	0.0001	ppm	0.0000	23.33	36.0500	0.0001 (ppm)
Ca (422.673 nm)	0.0018 u	ppm	0.0046	> 100.00	87.1400	0.0018 u (ppm)
Cd (214.439 nm)	0.0002	ppm	0.0001	70.99	-2.1330	0.0002 (ppm)
Co (228.615 nm)	-0.0003 u	ppm	0.0004	> 100.00	-12.0900	-0.0003 u (ppm)
Cr (205.560 nm)	0.0002	ppm	0.0003	> 100.00	1.4280	0.0002 (ppm)
Cu (324.754 nm)	0.0004	ppm	0.0000	13.28	149.2000	0.0004 (ppm)
Fe (238.204 nm)	0.0014 u	ppm	0.0032	> 100.00	-52.0900	0.0014 u (ppm)
K (766.491 nm)	0.0471	ppm	0.0065	13.75	-77.7600	0.0471 (ppm)
Li (670.783 nm)	-0.0007 u	ppm	0.0011	> 100.00	86.5400	-0.0007 u (ppm)
Mg (279.078 nm)	0.0027	ppm	0.0009	34.22	21.6900	0.0027 (ppm)
Mn (259.372 nm)	0.0001	ppm	0.0000	47.39	54.7300	0.0001 (ppm)
Mo (204.598 nm)	0.0017	ppm	0.0006	35.42	4.8110	0.0017 (ppm)
Na (589.592 nm)	-0.0874 u	ppm	0.0042	4.76	440.5000	-0.0874 u (ppm)
Ni (231.604 nm)	0.0006	ppm	0.0007	> 100.00	-9.3830	0.0006 (ppm)
P (213.618 nm)	-0.0029 u	ppm	0.0014	49.41	1.9270	-0.0029 u (ppm)
Pb (220.353 nm)	-0.0001 u	ppm	0.0008	> 100.00	8.4990	-0.0001 u (ppm)
Sb (206.834 nm)	0.0019	ppm	0.0023	> 100.00	4.2370	0.0019 (ppm)
Se (196.026 nm)	0.0015 u	ppm	0.0041	> 100.00	2.4430	0.0015 u (ppm)
Si (251.611 nm)	0.0004 u	ppm	0.0007	> 100.00	0.2773	0.0004 u (ppm)
Sn (189.925 nm)	0.0010 u	ppm	0.0061	> 100.00	0.2155	0.0010 u (ppm)
Sr (421.552 nm)	0.0002	ppm	0.0000	26.85	15.4400	0.0002 (ppm)
Ti (336.122 nm)	0.0012	ppm	0.0004	29.24	-37.2400	0.0012 (ppm)
Tl (190.794 nm)	0.0039	ppm	0.0018	47.11	9.7530	0.0039 (ppm)
V (292.401 nm)	0.0003	ppm	0.0002	62.36	84.6500	0.0003 (ppm)
W (207.912 nm)	0.0008	ppm	0.0005	64.70	-4.4930	0.0008 (ppm)
Zn (202.548 nm)	0.0003	ppm	0.0002	48.04	14.0200	0.0003 (ppm)
Zr (343.823 nm)	0.0001 u	ppm	0.0001	> 100.00	820.6000	0.0001 u (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9966	377200.0000	0.0017	0.17
Y_R 371.029	1.0080	51140.0000	0.0039	0.39

Sample Name: 440-258909-B-13-A@5

Date: 1/15/2020 1:38:45 PM

Rack:Tube: 1:11

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0005 u	ppm	0.0003	48.42	-190.9000	-0.0005 u (ppm)
Al (396.152 nm)	48.9600	ppm	0.0901	0.18	1483000.0000	48.9600 (ppm)
As (188.980 nm)	0.0219	ppm	0.0049	22.49	4.1400	0.0219 (ppm)
B (249.678 nm)	0.0079	ppm	0.0019	23.92	-73.3700	0.0079 (ppm)
Ba (233.527 nm)	0.3276	ppm	0.0003	0.10	28060.0000	0.3276 (ppm)
Be (234.861 nm)	0.0012	ppm	0.0001	4.63	2106.0000	0.0012 (ppm)
Ca (422.673 nm)	34.8500	ppm	0.1454	0.42	135900.0000	34.8500 (ppm)
Cd (214.439 nm)	-0.0002 u	ppm	0.0003	> 100.00	9.7460	-0.0002 u (ppm)
Co (228.615 nm)	0.0221	ppm	0.0011	4.96	352.4000	0.0221 (ppm)
Cr (205.560 nm)	0.1553	ppm	0.0007	0.44	693.6000	0.1553 (ppm)
Cu (324.754 nm)	3.0380	ppm	0.0063	0.21	119000.0000	3.0380 (ppm)
Fe (238.204 nm)	125.4000	ppm	0.3928	0.31	316600.0000	125.4000 (ppm)
K (766.491 nm)	13.3100	ppm	0.0095	0.07	13480.0000	13.3100 (ppm)
Li (670.783 nm)	0.0224	ppm	0.0023	10.50	837.9000	0.0224 (ppm)
Mg (279.078 nm)	41.2800	ppm	0.0810	0.20	111400.0000	41.2800 (ppm)
Mn (259.372 nm)	0.3896	ppm	0.0004	0.11	49920.0000	0.3896 (ppm)
Mo (204.598 nm)	0.0262	ppm	0.0007	2.72	106.1000	0.0262 (ppm)
Na (589.592 nm)	0.1574	ppm	0.0004	0.25	2741.0000	0.1574 (ppm)
Ni (231.604 nm)	0.0536	ppm	0.0019	3.51	216.2000	0.0536 (ppm)
P (213.618 nm)	8.9020	ppm	0.0872	0.98	6564.0000	8.9020 (ppm)
Pb (220.353 nm)	0.0320	ppm	0.0015	4.58	17.5100	0.0320 (ppm)
Sb (206.834 nm)	0.0057	ppm	0.0027	47.78	9.5860	0.0057 (ppm)
Se (196.026 nm)	0.0164	ppm	0.0062	38.09	-17.0600	0.0164 (ppm)
Si (251.611 nm)	0.8494	ppm	0.0010	0.12	1791.0000	0.8494 (ppm)
Sn (189.925 nm)	0.0025	ppm	0.0007	27.36	1.1010	0.0025 (ppm)
Sr (421.552 nm)	0.1957	ppm	0.0012	0.60	68040.0000	0.1957 (ppm)
Ti (336.122 nm)	2.6540	ppm	0.0045	0.17	266300.0000	2.6540 (ppm)
Tl (190.794 nm)	-0.0259 u	ppm	0.0011	4.42	-50.8100	-0.0259 u (ppm)
V (292.401 nm)	0.2850	ppm	0.0005	0.19	8880.0000	0.2850 (ppm)
W (207.912 nm)	0.0065	ppm	0.0019	29.39	4.4820	0.0065 (ppm)
Zn (202.548 nm)	0.1278	ppm	0.0002	0.18	2289.0000	0.1278 (ppm)
Zr (343.823 nm)	0.0482	ppm	0.0002	0.47	2203.0000	0.0482 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
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Ni (231.604 nm)	Y 371.029
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Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9568	362200.0000	0.0004	0.04
Y_R 371.029	0.9787	49640.0000	0.0016	0.16

Sample Name: 440-258909-B-14-A@5

Date: 1/15/2020 1:40:57 PM

Rack:Tube: 1:12

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0004 u	ppm	0.0001	18.90	-196.4000	-0.0004 u (ppm)
Al (396.152 nm)	49.9800	ppm	0.0199	0.04	1514000.0000	49.9800 (ppm)
As (188.980 nm)	0.0230	ppm	0.0053	23.18	4.4470	0.0230 (ppm)
B (249.678 nm)	0.0077	ppm	0.0008	10.32	-81.7400	0.0077 (ppm)
Ba (233.527 nm)	0.3323	ppm	0.0003	0.10	28470.0000	0.3323 (ppm)
Be (234.861 nm)	0.0012	ppm	0.0001	4.54	2197.0000	0.0012 (ppm)
Ca (422.673 nm)	33.6300	ppm	0.0804	0.24	131200.0000	33.6300 (ppm)
Cd (214.439 nm)	-0.0003 u	ppm	0.0002	71.59	9.2010	-0.0003 u (ppm)
Co (228.615 nm)	0.0235	ppm	0.0000	0.19	375.1000	0.0235 (ppm)
Cr (205.560 nm)	0.1632	ppm	0.0002	0.10	729.0000	0.1632 (ppm)
Cu (324.754 nm)	3.0470	ppm	0.0272	0.89	119300.0000	3.0470 (ppm)
Fe (238.204 nm)	131.2000	ppm	0.3348	0.26	331100.0000	131.2000 (ppm)
K (766.491 nm)	13.3600	ppm	0.0978	0.73	13530.0000	13.3600 (ppm)
Li (670.783 nm)	0.0263	ppm	0.0021	8.01	1037.0000	0.0263 (ppm)
Mg (279.078 nm)	42.0700	ppm	0.0198	0.05	113500.0000	42.0700 (ppm)
Mn (259.372 nm)	0.3910	ppm	0.0001	0.02	50660.0000	0.3910 (ppm)
Mo (204.598 nm)	0.0245	ppm	0.0010	3.91	99.8600	0.0245 (ppm)
Na (589.592 nm)	0.1368	ppm	0.0062	4.56	2677.0000	0.1368 (ppm)
Ni (231.604 nm)	0.0557	ppm	0.0018	3.17	225.4000	0.0557 (ppm)
P (213.618 nm)	9.8130	ppm	0.0420	0.43	7244.0000	9.8130 (ppm)
Pb (220.353 nm)	0.0342	ppm	0.0013	3.78	19.3700	0.0342 (ppm)
Sb (206.834 nm)	0.0012 u	ppm	0.0052	> 100.00	5.8140	0.0012 u (ppm)
Se (196.026 nm)	0.0161	ppm	0.0037	22.89	-18.4900	0.0161 (ppm)
Si (251.611 nm)	0.9132	ppm	0.0036	0.40	1925.0000	0.9132 (ppm)
Sn (189.925 nm)	0.0076	ppm	0.0032	41.67	3.9990	0.0076 (ppm)
Sr (421.552 nm)	0.1757	ppm	0.0005	0.29	61100.0000	0.1757 (ppm)
Ti (336.122 nm)	2.8170	ppm	0.0023	0.08	282600.0000	2.8170 (ppm)
Tl (190.794 nm)	-0.0323 u	ppm	0.0024	7.36	-59.5400	-0.0323 u (ppm)
V (292.401 nm)	0.2940	ppm	0.0000	0.01	9158.0000	0.2940 (ppm)
W (207.912 nm)	0.0025	ppm	0.0011	42.22	-2.0300	0.0025 (ppm)
Zn (202.548 nm)	0.1301	ppm	0.0003	0.26	2323.0000	0.1301 (ppm)
Zr (343.823 nm)	0.0503	ppm	0.0003	0.56	2264.0000	0.0503 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9534	360800.0000	0.0018	0.18
Y_R 371.029	0.9836	49890.0000	0.0018	0.18

Sample Name: 440-258909-B-15-A@5

Date: 1/15/2020 1:43:07 PM

Rack:Tube: 1:13

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0007 u	ppm	0.0005	76.06	-135.5000	-0.0007 u (ppm)
Al (396.152 nm)	53.5500	ppm	0.0958	0.18	1623000.0000	53.5500 (ppm)
As (188.980 nm)	0.0119	ppm	0.0043	35.92	1.0690	0.0119 (ppm)
B (249.678 nm)	0.0081	ppm	0.0007	9.23	-24.2900	0.0081 (ppm)
Ba (233.527 nm)	0.2860	ppm	0.0034	1.17	24510.0000	0.2860 (ppm)
Be (234.861 nm)	0.0022	ppm	0.0002	7.46	1634.0000	0.0022 (ppm)
Ca (422.673 nm)	42.1700	ppm	0.0709	0.17	164500.0000	42.1700 (ppm)
Cd (214.439 nm)	0.0000 u	ppm	0.0002	> 100.00	6.7760	0.0000 u (ppm)
Co (228.615 nm)	0.0424	ppm	0.0005	1.06	649.3000	0.0424 (ppm)
Cr (205.560 nm)	0.0656	ppm	0.0000	0.07	295.6000	0.0656 (ppm)
Cu (324.754 nm)	7.0870	ppm	0.0176	0.25	277300.0000	7.0870 (ppm)
Fe (238.204 nm)	83.5500	ppm	0.2530	0.30	210800.0000	83.5500 (ppm)
K (766.491 nm)	11.3200	ppm	0.0014	0.01	11450.0000	11.3200 (ppm)
Li (670.783 nm)	0.0320	ppm	0.0018	5.50	1441.0000	0.0320 (ppm)
Mg (279.078 nm)	46.1700	ppm	0.5093	1.10	124600.0000	46.1700 (ppm)
Mn (259.372 nm)	0.7959	ppm	0.0016	0.20	82880.0000	0.7959 (ppm)
Mo (204.598 nm)	0.0168	ppm	0.0009	5.57	70.0300	0.0168 (ppm)
Na (589.592 nm)	0.3931	ppm	0.0036	0.92	3671.0000	0.3931 (ppm)
Ni (231.604 nm)	0.0761	ppm	0.0008	1.10	316.4000	0.0761 (ppm)
P (213.618 nm)	5.2040	ppm	0.0607	1.17	3690.0000	5.2040 (ppm)
Pb (220.353 nm)	0.0226	ppm	0.0046	20.16	14.3400	0.0226 (ppm)
Sb (206.834 nm)	0.0023 u	ppm	0.0108	> 100.00	6.4960	0.0023 u (ppm)
Se (196.026 nm)	0.0235	ppm	0.0032	13.62	-3.6180	0.0235 (ppm)
Si (251.611 nm)	0.9874	ppm	0.0077	0.78	2099.0000	0.9874 (ppm)
Sn (189.925 nm)	0.0008	ppm	0.0010	> 100.00	0.0254	0.0008 (ppm)
Sr (421.552 nm)	0.2006	ppm	0.0003	0.13	69800.0000	0.2006 (ppm)
Ti (336.122 nm)	4.2980	ppm	0.0074	0.17	431300.0000	4.2980 (ppm)
Tl (190.794 nm)	-0.0429 u	ppm	0.0009	1.99	-90.2900	-0.0429 u (ppm)
V (292.401 nm)	0.1753	ppm	0.0002	0.13	5594.0000	0.1753 (ppm)
W (207.912 nm)	0.0045	ppm	0.0007	15.33	1.5900	0.0045 (ppm)
Zn (202.548 nm)	0.1341	ppm	0.0005	0.40	2894.0000	0.1341 (ppm)
Zr (343.823 nm)	0.0392	ppm	0.0001	0.18	2309.0000	0.0392 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9605	363600.0000	0.0011	0.11
Y_R 371.029	0.9857	49990.0000	0.0093	0.94

Sample Name: 440-258909-B-16-A@5

Date: 1/15/2020 1:45:19 PM

Rack:Tube: 1:14

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0003 u	ppm	0.0001	24.12	-287.5000	-0.0003 u (ppm)
Al (396.152 nm)	54.3400	ppm	0.0271	0.05	1647000.0000	54.3400 (ppm)
As (188.980 nm)	0.0479	ppm	0.0007	1.55	16.9100	0.0479 (ppm)
B (249.678 nm)	0.0213	ppm	0.0010	4.61	-8.0720	0.0213 (ppm)
Ba (233.527 nm)	0.3569	ppm	0.0022	0.61	30580.0000	0.3569 (ppm)
Be (234.861 nm)	0.0018	ppm	0.0001	3.28	3202.0000	0.0018 (ppm)
Ca (422.673 nm)	28.2600	ppm	0.0631	0.22	110200.0000	28.2600 (ppm)
Cd (214.439 nm)	-0.0004 u	ppm	0.0001	19.95	16.8600	-0.0004 u (ppm)
Co (228.615 nm)	0.0392	ppm	0.0014	3.45	575.9000	0.0392 (ppm)
Cr (205.560 nm)	0.0993	ppm	0.0007	0.74	446.5000	0.0993 (ppm)
Cu (324.754 nm)	4.4050	ppm	0.0063	0.14	172500.0000	4.4050 (ppm)
Fe (238.204 nm)	191.0000	ppm	0.4180	0.22	482100.0000	191.0000 (ppm)
K (766.491 nm)	17.2000	ppm	0.0411	0.24	17460.0000	17.2000 (ppm)
Li (670.783 nm)	0.0440	ppm	0.0004	0.97	1628.0000	0.0440 (ppm)
Mg (279.078 nm)	43.5600	ppm	0.3164	0.73	117500.0000	43.5600 (ppm)
Mn (259.372 nm)	0.4816	ppm	0.0003	0.06	65640.0000	0.4816 (ppm)
Mo (204.598 nm)	0.0430	ppm	0.0020	4.66	172.5000	0.0430 (ppm)
Na (589.592 nm)	3.3160	ppm	0.0105	0.32	19910.0000	3.3160 (ppm)
Ni (231.604 nm)	0.0802	ppm	0.0010	1.27	329.9000	0.0802 (ppm)
P (213.618 nm)	7.7470	ppm	0.0186	0.24	5666.0000	7.7470 (ppm)
Pb (220.353 nm)	0.0498	ppm	0.0019	3.73	26.2500	0.0498 (ppm)
Sb (206.834 nm)	-0.0088 u	ppm	0.0326	> 100.00	-3.9090	-0.0088 u (ppm)
Se (196.026 nm)	0.0189	ppm	0.0013	6.77	-30.1200	0.0189 (ppm)
Si (251.611 nm)	0.7128	ppm	0.0002	0.03	1502.0000	0.7128 (ppm)
Sn (189.925 nm)	0.0509	ppm	0.0042	8.21	29.0000	0.0509 (ppm)
Sr (421.552 nm)	0.3493	ppm	0.0007	0.21	121100.0000	0.3493 (ppm)
Ti (336.122 nm)	2.4650	ppm	0.0012	0.05	247300.0000	2.4650 (ppm)
Tl (190.794 nm)	-0.0313 u	ppm	0.0041	13.22	-46.5800	-0.0313 u (ppm)
V (292.401 nm)	0.2125	ppm	0.0002	0.12	6641.0000	0.2125 (ppm)
W (207.912 nm)	0.0110	ppm	0.0007	6.73	11.1700	0.0110 (ppm)
Zn (202.548 nm)	0.1244	ppm	0.0010	0.79	2374.0000	0.1244 (ppm)
Zr (343.823 nm)	0.0667	ppm	0.0000	0.00	2383.0000	0.0667 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9565	362000.0000	0.0016	0.17
Y_R 371.029	0.9816	49790.0000	0.0048	0.49

Sample Name: 440-258909-B-17-A@5

Date: 1/15/2020 1:47:31 PM

Rack:Tube: 1:15

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.0002	ppm	0.0002	> 100.00	-148.7000	0.0002 (ppm)
Al (396.152 nm)	41.3800	ppm	0.2063	0.50	1254000.0000	41.3800 (ppm)
As (188.980 nm)	0.0180	ppm	0.0012	6.91	3.0080	0.0180 (ppm)
B (249.678 nm)	0.0064	ppm	0.0011	16.53	-78.2100	0.0064 (ppm)
Ba (233.527 nm)	0.3366	ppm	0.0011	0.32	28830.0000	0.3366 (ppm)
Be (234.861 nm)	0.0007	ppm	0.0001	19.17	1880.0000	0.0007 (ppm)
Ca (422.673 nm)	28.2700	ppm	0.0688	0.24	110300.0000	28.2700 (ppm)
Cd (214.439 nm)	0.0000 u	ppm	0.0003	> 100.00	12.1100	0.0000 u (ppm)
Co (228.615 nm)	0.0269	ppm	0.0004	1.55	428.2000	0.0269 (ppm)
Cr (205.560 nm)	0.0575	ppm	0.0001	0.23	259.4000	0.0575 (ppm)
Cu (324.754 nm)	3.1000	ppm	0.0130	0.42	121400.0000	3.1000 (ppm)
Fe (238.204 nm)	115.6000	ppm	0.1541	0.13	291700.0000	115.6000 (ppm)
K (766.491 nm)	13.1300	ppm	0.1094	0.83	13300.0000	13.1300 (ppm)
Li (670.783 nm)	0.0253	ppm	0.0003	1.20	1039.0000	0.0253 (ppm)
Mg (279.078 nm)	38.4600	ppm	0.0976	0.25	103800.0000	38.4600 (ppm)
Mn (259.372 nm)	0.3916	ppm	0.0030	0.76	49030.0000	0.3916 (ppm)
Mo (204.598 nm)	0.0242	ppm	0.0011	4.48	97.6300	0.0242 (ppm)
Na (589.592 nm)	0.6098	ppm	0.0054	0.89	5048.0000	0.6098 (ppm)
Ni (231.604 nm)	0.0519	ppm	0.0011	2.05	209.2000	0.0519 (ppm)
P (213.618 nm)	7.3120	ppm	0.0367	0.50	5375.0000	7.3120 (ppm)
Pb (220.353 nm)	0.0265	ppm	0.0027	10.35	10.2800	0.0265 (ppm)
Sb (206.834 nm)	-0.0021 u	ppm	0.0070	> 100.00	1.8940	-0.0021 u (ppm)
Se (196.026 nm)	0.0179	ppm	0.0072	40.23	-13.9100	0.0179 (ppm)
Si (251.611 nm)	0.7946	ppm	0.0141	1.77	1682.0000	0.7946 (ppm)
Sn (189.925 nm)	0.0189	ppm	0.0053	28.15	10.4700	0.0189 (ppm)
Sr (421.552 nm)	0.1616	ppm	0.0001	0.07	56190.0000	0.1616 (ppm)
Ti (336.122 nm)	3.2910	ppm	0.0170	0.52	330200.0000	3.2910 (ppm)
Tl (190.794 nm)	-0.0308 u	ppm	0.0035	11.53	-61.7200	-0.0308 u (ppm)
V (292.401 nm)	0.1596	ppm	0.0006	0.35	5060.0000	0.1596 (ppm)
W (207.912 nm)	0.0005 u	ppm	0.0013	> 100.00	-5.2540	0.0005 u (ppm)
Zn (202.548 nm)	0.1100	ppm	0.0003	0.29	2031.0000	0.1100 (ppm)
Zr (343.823 nm)	0.0445	ppm	0.0001	0.20	2100.0000	0.0445 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9616	364000.0000	0.0000	0.00
Y_R 371.029	0.9824	49830.0000	0.0035	0.36

Sample Name: 440-258909-B-18-A@5

Date: 1/15/2020 1:49:43 PM

Rack:Tube: 1:16

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0007 u	ppm	0.0004	57.03	-201.9000	-0.0007 u (ppm)
Al (396.152 nm)	46.9300	ppm	0.1194	0.25	1422000.0000	46.9300 (ppm)
As (188.980 nm)	0.0325	ppm	0.0037	11.47	11.0200	0.0325 (ppm)
B (249.678 nm)	0.0083	ppm	0.0010	11.55	-72.7300	0.0083 (ppm)
Ba (233.527 nm)	0.3305	ppm	0.0022	0.68	28320.0000	0.3305 (ppm)
Be (234.861 nm)	0.0009	ppm	0.0002	18.46	2102.0000	0.0009 (ppm)
Ca (422.673 nm)	33.6000	ppm	0.3337	0.99	131000.0000	33.6000 (ppm)
Cd (214.439 nm)	-0.0002 u	ppm	0.0003	> 100.00	10.4300	-0.0002 u (ppm)
Co (228.615 nm)	0.0370	ppm	0.0003	0.91	549.6000	0.0370 (ppm)
Cr (205.560 nm)	0.0823	ppm	0.0008	0.92	370.0000	0.0823 (ppm)
Cu (324.754 nm)	4.1760	ppm	0.0016	0.04	163500.0000	4.1760 (ppm)
Fe (238.204 nm)	127.8000	ppm	1.1590	0.91	322600.0000	127.8000 (ppm)
K (766.491 nm)	14.0400	ppm	0.1430	1.02	14230.0000	14.0400 (ppm)
Li (670.783 nm)	0.0291	ppm	0.0030	10.28	1137.0000	0.0291 (ppm)
Mg (279.078 nm)	42.0900	ppm	0.2163	0.51	113600.0000	42.0900 (ppm)
Mn (259.372 nm)	0.5015	ppm	0.0009	0.19	60570.0000	0.5015 (ppm)
Mo (204.598 nm)	0.0257	ppm	0.0018	6.93	104.1000	0.0257 (ppm)
Na (589.592 nm)	0.8925	ppm	0.0021	0.24	6641.0000	0.8925 (ppm)
Ni (231.604 nm)	0.0616	ppm	0.0005	0.84	251.3000	0.0616 (ppm)
P (213.618 nm)	11.4100	ppm	0.0289	0.25	8405.0000	11.4100 (ppm)
Pb (220.353 nm)	0.0313	ppm	0.0008	2.48	15.1000	0.0313 (ppm)
Sb (206.834 nm)	-0.0036 u	ppm	0.0005	14.12	0.7846	-0.0036 u (ppm)
Se (196.026 nm)	0.0112	ppm	0.0001	0.84	-20.8500	0.0112 (ppm)
Si (251.611 nm)	0.8362	ppm	0.0025	0.30	1765.0000	0.8362 (ppm)
Sn (189.925 nm)	0.0491	ppm	0.0011	2.34	27.9300	0.0491 (ppm)
Sr (421.552 nm)	0.1905	ppm	0.0014	0.75	66210.0000	0.1905 (ppm)
Ti (336.122 nm)	2.8310	ppm	0.0029	0.10	284000.0000	2.8310 (ppm)
Tl (190.794 nm)	-0.0296 u	ppm	0.0019	6.26	-53.6500	-0.0296 u (ppm)
V (292.401 nm)	0.1643	ppm	0.0001	0.09	5197.0000	0.1643 (ppm)
W (207.912 nm)	0.0022 u	ppm	0.0031	> 100.00	-2.5810	0.0022 u (ppm)
Zn (202.548 nm)	0.1260	ppm	0.0004	0.34	2399.0000	0.1260 (ppm)
Zr (343.823 nm)	0.0495	ppm	0.0004	0.78	2252.0000	0.0495 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9585	362800.0000	0.0011	0.11
Y_R 371.029	0.9785	49630.0000	0.0027	0.28

Sample Name: 440-258909-B-19-A@5

Date: 1/15/2020 1:51:55 PM

Rack:Tube: 1:17

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0008 u	ppm	0.0000	5.03	-187.5000	-0.0008 u (ppm)
Al (396.152 nm)	51.5700	ppm	0.2447	0.47	1563000.0000	51.5700 (ppm)
As (188.980 nm)	0.0211	ppm	0.0036	17.08	4.5970	0.0211 (ppm)
B (249.678 nm)	0.0057	ppm	0.0012	21.74	-87.9300	0.0057 (ppm)
Ba (233.527 nm)	0.2640	ppm	0.0027	1.02	22630.0000	0.2640 (ppm)
Be (234.861 nm)	0.0015	ppm	0.0003	21.67	2038.0000	0.0015 (ppm)
Ca (422.673 nm)	33.5400	ppm	0.1058	0.32	130800.0000	33.5400 (ppm)
Cd (214.439 nm)	0.0000 u	ppm	0.0001	> 100.00	13.3400	0.0000 u (ppm)
Co (228.615 nm)	0.0397	ppm	0.0002	0.44	584.3000	0.0397 (ppm)
Cr (205.560 nm)	0.0967	ppm	0.0002	0.22	434.0000	0.0967 (ppm)
Cu (324.754 nm)	5.6240	ppm	0.0082	0.15	220100.0000	5.6240 (ppm)
Fe (238.204 nm)	117.0000	ppm	0.6024	0.51	295300.0000	117.0000 (ppm)
K (766.491 nm)	12.0100	ppm	0.0097	0.08	12160.0000	12.0100 (ppm)
Li (670.783 nm)	0.0355	ppm	0.0012	3.39	1485.0000	0.0355 (ppm)
Mg (279.078 nm)	42.2300	ppm	0.4160	0.99	113900.0000	42.2300 (ppm)
Mn (259.372 nm)	0.5760	ppm	0.0031	0.53	66240.0000	0.5760 (ppm)
Mo (204.598 nm)	0.0146	ppm	0.0013	8.64	61.9100	0.0146 (ppm)
Na (589.592 nm)	0.7115	ppm	0.0082	1.15	5605.0000	0.7115 (ppm)
Ni (231.604 nm)	0.0659	ppm	0.0014	2.17	270.4000	0.0659 (ppm)
P (213.618 nm)	11.8800	ppm	0.0198	0.17	8710.0000	11.8800 (ppm)
Pb (220.353 nm)	0.0230	ppm	0.0005	1.99	2.8090	0.0230 (ppm)
Sb (206.834 nm)	0.0006 u	ppm	0.0016	> 100.00	4.9720	0.0006 u (ppm)
Se (196.026 nm)	0.0127	ppm	0.0028	21.68	-17.5500	0.0127 (ppm)
Si (251.611 nm)	0.8285	ppm	0.0135	1.63	1751.0000	0.8285 (ppm)
Sn (189.925 nm)	0.0283	ppm	0.0022	7.80	15.9800	0.0283 (ppm)
Sr (421.552 nm)	0.1923	ppm	0.0007	0.39	66860.0000	0.1923 (ppm)
Ti (336.122 nm)	2.8660	ppm	0.0136	0.47	287600.0000	2.8660 (ppm)
Tl (190.794 nm)	-0.0281 u	ppm	0.0013	4.61	-53.8400	-0.0281 u (ppm)
V (292.401 nm)	0.1855	ppm	0.0007	0.38	5850.0000	0.1855 (ppm)
W (207.912 nm)	0.0021 u	ppm	0.0038	> 100.00	-2.6990	0.0021 u (ppm)
Zn (202.548 nm)	0.1170	ppm	0.0009	0.74	2440.0000	0.1170 (ppm)
Zr (343.823 nm)	0.0450	ppm	0.0001	0.32	2109.0000	0.0450 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9590	363000.0000	0.0015	0.16
Y_R 371.029	0.9799	49700.0000	0.0032	0.32

Sample Name: 440-258909-B-20-A@5

Date: 1/15/2020 1:54:07 PM

Rack:Tube: 1:18

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0005 u	ppm	0.0002	37.67	-386.8000	-0.0005 u (ppm)
Al (396.152 nm)	60.2200	ppm	0.1282	0.21	1825000.0000	60.2200 (ppm)
As (188.980 nm)	0.0589	ppm	0.0018	3.09	21.0800	0.0589 (ppm)
B (249.678 nm)	0.0223	ppm	0.0002	0.96	-53.7300	0.0223 (ppm)
Ba (233.527 nm)	0.2911	ppm	0.0031	1.05	24960.0000	0.2911 (ppm)
Be (234.861 nm)	0.0022	ppm	0.0000	1.90	4014.0000	0.0022 (ppm)
Ca (422.673 nm)	59.0000	ppm	0.2535	0.43	230000.0000	59.0000 (ppm)
Cd (214.439 nm)	0.0000 u	ppm	0.0002	> 100.00	34.3400	0.0000 u (ppm)
Co (228.615 nm)	0.0306	ppm	0.0015	4.76	516.8000	0.0306 (ppm)
Cr (205.560 nm)	0.0640	ppm	0.0002	0.38	291.2000	0.0640 (ppm)
Cu (324.754 nm)	5.4210	ppm	0.0119	0.22	212200.0000	5.4210 (ppm)
Fe (238.204 nm)	240.0000	ppm	2.0410	0.85	605700.0000	240.0000 (ppm)
K (766.491 nm)	24.6200	ppm	0.0988	0.40	25040.0000	24.6200 (ppm)
Li (670.783 nm)	0.0549	ppm	0.0000	0.03	1999.0000	0.0549 (ppm)
Mg (279.078 nm)	41.4300	ppm	0.4053	0.98	111700.0000	41.4300 (ppm)
Mn (259.372 nm)	0.5710	ppm	0.0023	0.40	79280.0000	0.5710 (ppm)
Mo (204.598 nm)	0.0254	ppm	0.0019	7.55	106.3000	0.0254 (ppm)
Na (589.592 nm)	3.2540	ppm	0.0045	0.14	19980.0000	3.2540 (ppm)
Ni (231.604 nm)	0.0625	ppm	0.0002	0.28	249.5000	0.0625 (ppm)
P (213.618 nm)	6.8770	ppm	0.2880	4.19	4991.0000	6.8770 (ppm)
Pb (220.353 nm)	0.0653	ppm	0.0030	4.53	35.3700	0.0653 (ppm)
Sb (206.834 nm)	0.0073	ppm	0.0065	89.84	10.8000	0.0073 (ppm)
Se (196.026 nm)	0.0358	ppm	0.0028	7.68	-31.1100	0.0358 (ppm)
Si (251.611 nm)	0.9003	ppm	0.0027	0.30	1906.0000	0.9003 (ppm)
Sn (189.925 nm)	0.0114	ppm	0.0015	13.36	6.1130	0.0114 (ppm)
Sr (421.552 nm)	0.9978	ppm	0.0051	0.51	345700.0000	0.9978 (ppm)
Ti (336.122 nm)	4.4870	ppm	0.0065	0.14	450300.0000	4.4870 (ppm)
Tl (190.794 nm)	-0.0492 u	ppm	0.0017	3.47	-88.0300	-0.0492 u (ppm)
V (292.401 nm)	0.2597	ppm	0.0004	0.17	8174.0000	0.2597 (ppm)
W (207.912 nm)	0.0042	ppm	0.0007	16.36	-1.0580	0.0042 (ppm)
Zn (202.548 nm)	0.0971	ppm	0.0001	0.09	2044.0000	0.0971 (ppm)
Zr (343.823 nm)	0.0801	ppm	0.0006	0.73	2483.0000	0.0801 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9477	358700.0000	0.0015	0.15
Y_R 371.029	0.9720	49300.0000	0.0054	0.55

Sample Name: 440-258909-B-21-A@5

Date: 1/15/2020 1:56:19 PM

Rack:Tube: 1:19

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0002 u	ppm	0.0005	> 100.00	-175.1000	-0.0002 u (ppm)
Al (396.152 nm)	66.3400	ppm	0.0469	0.07	2010000.0000	66.3400 (ppm)
As (188.980 nm)	0.0502	ppm	0.0063	12.59	22.5400	0.0502 (ppm)
B (249.678 nm)	0.0105	ppm	0.0000	0.08	-41.5700	0.0105 (ppm)
Ba (233.527 nm)	0.2794	ppm	0.0003	0.12	23950.0000	0.2794 (ppm)
Be (234.861 nm)	0.0010	ppm	0.0001	11.53	2002.0000	0.0010 (ppm)
Ca (422.673 nm)	27.7200	ppm	0.0745	0.27	108200.0000	27.7200 (ppm)
Cd (214.439 nm)	0.0001	ppm	0.0001	44.32	15.4700	0.0001 (ppm)
Co (228.615 nm)	0.0296	ppm	0.0000	0.12	481.2000	0.0296 (ppm)
Cr (205.560 nm)	0.0532	ppm	0.0002	0.46	240.8000	0.0532 (ppm)
Cu (324.754 nm)	4.2010	ppm	0.0129	0.31	164400.0000	4.2010 (ppm)
Fe (238.204 nm)	120.4000	ppm	0.4074	0.34	303800.0000	120.4000 (ppm)
K (766.491 nm)	11.4100	ppm	0.0681	0.60	11550.0000	11.4100 (ppm)
Li (670.783 nm)	0.0331	ppm	0.0005	1.61	1542.0000	0.0331 (ppm)
Mg (279.078 nm)	57.6400	ppm	0.0781	0.14	155600.0000	57.6400 (ppm)
Mn (259.372 nm)	0.4903	ppm	0.0016	0.32	58740.0000	0.4903 (ppm)
Mo (204.598 nm)	0.0188	ppm	0.0000	0.22	79.6600	0.0188 (ppm)
Na (589.592 nm)	0.9265	ppm	0.0208	2.24	6765.0000	0.9265 (ppm)
Ni (231.604 nm)	0.0553	ppm	0.0005	0.96	224.1000	0.0553 (ppm)
P (213.618 nm)	5.0040	ppm	0.0640	1.28	3624.0000	5.0040 (ppm)
Pb (220.353 nm)	0.0354	ppm	0.0008	2.22	24.1200	0.0354 (ppm)
Sb (206.834 nm)	-0.0013 u	ppm	0.0005	37.67	2.9950	-0.0013 u (ppm)
Se (196.026 nm)	0.0262	ppm	0.0006	2.45	-10.0400	0.0262 (ppm)
Si (251.611 nm)	0.9559	ppm	0.0007	0.07	2028.0000	0.9559 (ppm)
Sn (189.925 nm)	-0.0072 u	ppm	0.0026	35.39	-4.5820	-0.0072 u (ppm)
Sr (421.552 nm)	0.3609	ppm	0.0014	0.40	125100.0000	0.3609 (ppm)
Ti (336.122 nm)	4.0220	ppm	0.0036	0.09	403700.0000	4.0220 (ppm)
Tl (190.794 nm)	-0.0406 u	ppm	0.0012	2.95	-81.8900	-0.0406 u (ppm)
V (292.401 nm)	0.1993	ppm	0.0001	0.04	6297.0000	0.1993 (ppm)
W (207.912 nm)	0.0116	ppm	0.0003	2.57	12.0600	0.0116 (ppm)
Zn (202.548 nm)	0.0841	ppm	0.0001	0.07	1772.0000	0.0841 (ppm)
Zr (343.823 nm)	0.0423	ppm	0.0002	0.44	1821.0000	0.0423 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9519	360300.0000	0.0022	0.23
Y_R 371.029	0.9810	49760.0000	0.0055	0.56

Sample Name: CCV 6043773

Date: 1/15/2020 2:03:21 PM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.5041	ppm	0.0007	0.14	20340.0000	0.5041 (ppm)
Al (396.152 nm)	1.0160	ppm	0.0039	0.38	31590.0000	1.0160 (ppm)
As (188.980 nm)	1.0240	ppm	0.0118	1.15	614.0000	1.0240 (ppm)
B (249.678 nm)	1.0170	ppm	0.0037	0.37	10750.0000	1.0170 (ppm)
Ba (233.527 nm)	1.0070	ppm	0.0010	0.10	86040.0000	1.0070 (ppm)
Be (234.861 nm)	1.0140	ppm	0.0016	0.15	159000.0000	1.0140 (ppm)
Ca (422.673 nm)	5.0220	ppm	0.0170	0.34	19660.0000	5.0220 (ppm)
Cd (214.439 nm)	1.0150	ppm	0.0001	0.01	21900.0000	1.0150 (ppm)
Co (228.615 nm)	1.0160	ppm	0.0048	0.47	13130.0000	1.0160 (ppm)
Cr (205.560 nm)	1.0100	ppm	0.0021	0.21	4483.0000	1.0100 (ppm)
Cu (324.754 nm)	1.0140	ppm	0.0019	0.19	39810.0000	1.0140 (ppm)
Fe (238.204 nm)	1.0330	ppm	0.0081	0.78	2551.0000	1.0330 (ppm)
K (766.491 nm)	10.1100	ppm	0.0387	0.38	10190.0000	10.1100 (ppm)
Li (670.783 nm)	1.0000	ppm	0.0007	0.07	56970.0000	1.0000 (ppm)
Mg (279.078 nm)	5.0530	ppm	0.0065	0.13	13650.0000	5.0530 (ppm)
Mn (259.372 nm)	1.0120	ppm	0.0007	0.07	94070.0000	1.0120 (ppm)
Mo (204.598 nm)	1.0210	ppm	0.0063	0.62	3931.0000	1.0210 (ppm)
Na (589.592 nm)	9.9100	ppm	0.0072	0.07	53210.0000	9.9100 (ppm)
Ni (231.604 nm)	1.0150	ppm	0.0002	0.02	4441.0000	1.0150 (ppm)
P (213.618 nm)	1.0100	ppm	0.0023	0.23	713.5000	1.0100 (ppm)
Pb (220.353 nm)	1.0130	ppm	0.0002	0.02	2009.0000	1.0130 (ppm)
Sb (206.834 nm)	1.0230	ppm	0.0127	1.24	897.0000	1.0230 (ppm)
Se (196.026 nm)	1.0120	ppm	0.0027	0.27	623.0000	1.0120 (ppm)
Si (251.611 nm)	5.0820	ppm	0.0485	0.95	10750.0000	5.0820 (ppm)
Sn (189.925 nm)	1.0190	ppm	0.0047	0.47	587.8000	1.0190 (ppm)
Sr (421.552 nm)	1.0040	ppm	0.0026	0.26	347300.0000	1.0040 (ppm)
Ti (336.122 nm)	1.0280	ppm	0.0043	0.42	103100.0000	1.0280 (ppm)
Tl (190.794 nm)	1.0170	ppm	0.0085	0.83	1100.0000	1.0170 (ppm)
V (292.401 nm)	1.0120	ppm	0.0004	0.04	30770.0000	1.0120 (ppm)
W (207.912 nm)	1.0200	ppm	0.0041	0.40	1667.0000	1.0200 (ppm)
Zn (202.548 nm)	1.0150	ppm	0.0003	0.03	15730.0000	1.0150 (ppm)
Zr (343.823 nm)	0.9845	ppm	0.0055	0.56	80440.0000	0.9845 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9837	372300.0000	0.0012	0.12
Y_R 371.029	1.0050	50960.0000	0.0000	0.00

Sample Name: CCB 6043772

Date: 1/15/2020 2:07:59 PM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.0000 u	ppm	0.0001	> 100.00	44.7300	0.0000 u (ppm)
Al (396.152 nm)	0.0006 u	ppm	0.0009	> 100.00	-305.8000	0.0006 u (ppm)
As (188.980 nm)	0.0070	ppm	0.0009	13.19	2.9580	0.0070 (ppm)
B (249.678 nm)	0.0009	ppm	0.0002	25.34	-3.3010	0.0009 (ppm)
Ba (233.527 nm)	0.0002	ppm	0.0000	23.51	74.3500	0.0002 (ppm)
Be (234.861 nm)	0.0001	ppm	0.0001	64.66	37.8500	0.0001 (ppm)
Ca (422.673 nm)	0.0040	ppm	0.0032	80.19	95.9300	0.0040 (ppm)
Cd (214.439 nm)	0.0002	ppm	0.0003	> 100.00	-1.5860	0.0002 (ppm)
Co (228.615 nm)	0.0000 u	ppm	0.0004	> 100.00	-8.9850	0.0000 u (ppm)
Cr (205.560 nm)	0.0003 u	ppm	0.0008	> 100.00	1.9180	0.0003 u (ppm)
Cu (324.754 nm)	0.0003	ppm	0.0000	6.85	147.9000	0.0003 (ppm)
Fe (238.204 nm)	0.0002 u	ppm	0.0078	> 100.00	-55.0300	0.0002 u (ppm)
K (766.491 nm)	0.0423	ppm	0.0536	> 100.00	-82.6400	0.0423 (ppm)
Li (670.783 nm)	0.0008	ppm	0.0003	35.84	171.1000	0.0008 (ppm)
Mg (279.078 nm)	0.0016 u	ppm	0.0037	> 100.00	18.6000	0.0016 u (ppm)
Mn (259.372 nm)	0.0002	ppm	0.0001	35.92	58.9600	0.0002 (ppm)
Mo (204.598 nm)	0.0023	ppm	0.0006	24.51	7.2220	0.0023 (ppm)
Na (589.592 nm)	-0.1056 u	ppm	0.0011	1.06	344.2000	-0.1056 u (ppm)
Ni (231.604 nm)	0.0005 u	ppm	0.0008	> 100.00	-9.9480	0.0005 u (ppm)
P (213.618 nm)	-0.0042 u	ppm	0.0058	> 100.00	0.9083	-0.0042 u (ppm)
Pb (220.353 nm)	0.0027	ppm	0.0012	42.87	14.0600	0.0027 (ppm)
Sb (206.834 nm)	0.0038	ppm	0.0016	42.29	5.8990	0.0038 (ppm)
Se (196.026 nm)	0.0097	ppm	0.0038	39.10	7.4090	0.0097 (ppm)
Si (251.611 nm)	0.0002 u	ppm	0.0014	> 100.00	-0.1767	0.0002 u (ppm)
Sn (189.925 nm)	-0.0011 u	ppm	0.0033	> 100.00	-0.9984	-0.0011 u (ppm)
Sr (421.552 nm)	0.0001	ppm	0.0000	35.33	-7.5200	0.0001 (ppm)
Ti (336.122 nm)	0.0011	ppm	0.0004	33.94	-43.4200	0.0011 (ppm)
Tl (190.794 nm)	0.0038	ppm	0.0011	28.83	9.6940	0.0038 (ppm)
V (292.401 nm)	0.0005	ppm	0.0000	9.88	89.3200	0.0005 (ppm)
W (207.912 nm)	0.0028	ppm	0.0014	49.23	-1.3420	0.0028 (ppm)
Zn (202.548 nm)	0.0004	ppm	0.0002	52.08	14.5100	0.0004 (ppm)
Zr (343.823 nm)	0.0003	ppm	0.0001	19.72	841.3000	0.0003 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9948	376500.0000	0.0055	0.55
Y_R 371.029	1.0030	50860.0000	0.0037	0.37

Sample Name: MB 440-590387/1-A@5

Date: 1/15/2020 2:11:09 PM

Rack:Tube: 1:20

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0005 u	ppm	0.0004	80.92	24.1600	-0.0005 u (ppm)
Al (396.152 nm)	0.0027	ppm	0.0000	0.24	-244.9000	0.0027 (ppm)
As (188.980 nm)	0.0111	ppm	0.0038	33.92	5.4070	0.0111 (ppm)
B (249.678 nm)	0.0000 u	ppm	0.0000	75.19	-13.1500	0.0000 u (ppm)
Ba (233.527 nm)	0.0004	ppm	0.0000	9.63	98.3100	0.0004 (ppm)
Be (234.861 nm)	0.0000 u	ppm	0.0000	> 100.00	13.9900	0.0000 u (ppm)
Ca (422.673 nm)	0.0282	ppm	0.0127	45.21	190.1000	0.0282 (ppm)
Cd (214.439 nm)	0.0002	ppm	0.0000	1.14	-2.8120	0.0002 (ppm)
Co (228.615 nm)	-0.0001 u	ppm	0.0005	> 100.00	-10.6600	-0.0001 u (ppm)
Cr (205.560 nm)	0.0002	ppm	0.0002	84.62	1.4890	0.0002 (ppm)
Cu (324.754 nm)	0.0040	ppm	0.0002	5.66	292.0000	0.0040 (ppm)
Fe (238.204 nm)	0.0201	ppm	0.0003	1.32	-4.9020	0.0201 (ppm)
K (766.491 nm)	0.0208	ppm	0.0129	61.73	-104.5000	0.0208 (ppm)
Li (670.783 nm)	-0.0012 u	ppm	0.0011	96.25	59.6100	-0.0012 u (ppm)
Mg (279.078 nm)	0.0045	ppm	0.0015	33.70	26.4400	0.0045 (ppm)
Mn (259.372 nm)	0.0003	ppm	0.0001	20.23	76.8800	0.0003 (ppm)
Mo (204.598 nm)	0.0005	ppm	0.0003	53.78	0.1996	0.0005 (ppm)
Na (589.592 nm)	-0.0724 u	ppm	0.0043	5.90	519.5000	-0.0724 u (ppm)
Ni (231.604 nm)	-0.0002 u	ppm	0.0000	4.61	-12.7200	-0.0002 u (ppm)
P (213.618 nm)	-0.0004 u	ppm	0.0008	> 100.00	3.6710	-0.0004 u (ppm)
Pb (220.353 nm)	0.0009	ppm	0.0007	75.13	10.4900	0.0009 (ppm)
Sb (206.834 nm)	0.0050	ppm	0.0033	64.99	7.0250	0.0050 (ppm)
Se (196.026 nm)	0.0030 u	ppm	0.0044	> 100.00	3.3470	0.0030 u (ppm)
Si (251.611 nm)	0.0042	ppm	0.0012	28.32	8.3550	0.0042 (ppm)
Sn (189.925 nm)	0.0043	ppm	0.0042	96.15	2.1580	0.0043 (ppm)
Sr (421.552 nm)	0.0000 u	ppm	0.0001	> 100.00	-20.9500	0.0000 u (ppm)
Ti (336.122 nm)	0.0009	ppm	0.0003	37.20	-70.1400	0.0009 (ppm)
Tl (190.794 nm)	-0.0034 u	ppm	0.0013	37.64	1.6950	-0.0034 u (ppm)
V (292.401 nm)	0.0002	ppm	0.0001	78.92	81.3700	0.0002 (ppm)
W (207.912 nm)	0.0037	ppm	0.0031	84.58	0.2105	0.0037 (ppm)
Zn (202.548 nm)	0.0015	ppm	0.0002	15.64	32.0200	0.0015 (ppm)
Zr (343.823 nm)	0.0006	ppm	0.0001	9.83	859.4000	0.0006 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9944	376400.0000	0.0015	0.15
Y_R 371.029	1.0020	50830.0000	0.0041	0.41

Sample Name: LCS 440-590387/2-A@5

Date: 1/15/2020 2:13:21 PM

Rack:Tube: 1:21

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.1848	ppm	0.0002	0.13	7484.0000	0.1848 (ppm)
Al (396.152 nm)	0.3663	ppm	0.0011	0.30	11190.0000	0.3663 (ppm)
As (188.980 nm)	0.3690	ppm	0.0056	1.53	220.4000	0.3690 (ppm)
B (249.678 nm)	0.3643	ppm	0.0029	0.78	3841.0000	0.3643 (ppm)
Ba (233.527 nm)	0.3738	ppm	0.0026	0.70	31990.0000	0.3738 (ppm)
Be (234.861 nm)	0.3641	ppm	0.0004	0.12	57140.0000	0.3641 (ppm)
Ca (422.673 nm)	1.8830	ppm	0.0002	0.01	7420.0000	1.8830 (ppm)
Cd (214.439 nm)	0.3696	ppm	0.0005	0.14	7973.0000	0.3696 (ppm)
Co (228.615 nm)	0.3814	ppm	0.0032	0.83	4922.0000	0.3814 (ppm)
Cr (205.560 nm)	0.3784	ppm	0.0001	0.04	1680.0000	0.3784 (ppm)
Cu (324.754 nm)	0.3844	ppm	0.0010	0.27	15170.0000	0.3844 (ppm)
Fe (238.204 nm)	0.3998	ppm	0.0024	0.61	952.9000	0.3998 (ppm)
K (766.491 nm)	3.7550	ppm	0.0583	1.55	3704.0000	3.7550 (ppm)
Li (670.783 nm)	0.3720	ppm	0.0000	0.00	21270.0000	0.3720 (ppm)
Mg (279.078 nm)	1.8670	ppm	0.0113	0.61	5052.0000	1.8670 (ppm)
Mn (259.372 nm)	0.3779	ppm	0.0005	0.14	35170.0000	0.3779 (ppm)
Mo (204.598 nm)	0.3985	ppm	0.0013	0.32	1534.0000	0.3985 (ppm)
Na (589.592 nm)	3.6750	ppm	0.0136	0.37	20300.0000	3.6750 (ppm)
Ni (231.604 nm)	0.3779	ppm	0.0019	0.49	1646.0000	0.3779 (ppm)
P (213.618 nm)	0.3683	ppm	0.0030	0.82	261.9000	0.3683 (ppm)
Pb (220.353 nm)	0.3776	ppm	0.0023	0.60	754.0000	0.3776 (ppm)
Sb (206.834 nm)	0.3794	ppm	0.0001	0.01	334.0000	0.3794 (ppm)
Se (196.026 nm)	0.3454	ppm	0.0004	0.12	213.7000	0.3454 (ppm)
Si (251.611 nm)	0.6143	ppm	0.0073	1.19	1340.0000	0.6143 (ppm)
Sn (189.925 nm)	0.3772	ppm	0.0043	1.13	217.2000	0.3772 (ppm)
Sr (421.552 nm)	0.3702	ppm	0.0032	0.87	128000.0000	0.3702 (ppm)
Ti (336.122 nm)	0.3770	ppm	0.0001	0.02	37690.0000	0.3770 (ppm)
Tl (190.794 nm)	0.3668	ppm	0.0080	2.17	400.3000	0.3668 (ppm)
V (292.401 nm)	0.3775	ppm	0.0003	0.08	11520.0000	0.3775 (ppm)
W (207.912 nm)	0.3803	ppm	0.0024	0.64	617.5000	0.3803 (ppm)
Zn (202.548 nm)	0.3704	ppm	0.0002	0.06	5751.0000	0.3704 (ppm)
Zr (343.823 nm)	0.3102	ppm	0.0036	1.18	25900.0000	0.3102 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9847	372700.0000	0.0017	0.17
Y_R 371.029	1.0040	50940.0000	0.0038	0.38

Sample Name: 440-258523-a-10-b

Date: 1/15/2020 2:15:33 PM

Rack:Tube: 2:5

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0008 u	ppm	0.0001	7.58	4.9440	-0.0008 u (ppm)
Al (396.152 nm)	0.0271	ppm	0.0002	0.81	581.4000	0.0271 (ppm)
As (188.980 nm)	0.0056	ppm	0.0000	0.34	1.7500	0.0056 (ppm)
B (249.678 nm)	0.1531	ppm	0.0004	0.27	1624.0000	0.1531 (ppm)
Ba (233.527 nm)	0.0592	ppm	0.0004	0.72	5122.0000	0.0592 (ppm)
Be (234.861 nm)	0.0001	ppm	0.0001	98.54	23.6000	0.0001 (ppm)
Ca (422.673 nm)	103.5000	ppm	0.2275	0.22	403600.0000	103.5000 (ppm)
Cd (214.439 nm)	0.0001	ppm	0.0001	97.74	-3.7460	0.0001 (ppm)
Co (228.615 nm)	0.0002	ppm	0.0001	58.86	-3.8540	0.0002 (ppm)
Cr (205.560 nm)	0.0005	ppm	0.0001	11.70	4.1320	0.0005 (ppm)
Cu (324.754 nm)	0.0045	ppm	0.0002	5.17	237.8000	0.0045 (ppm)
Fe (238.204 nm)	0.0292	ppm	0.0033	11.26	20.5200	0.0292 (ppm)
K (766.491 nm)	5.4260	ppm	0.0788	1.45	5421.0000	5.4260 (ppm)
Li (670.783 nm)	0.0048	ppm	0.0008	16.75	612.5000	0.0048 (ppm)
Mg (279.078 nm)	29.3000	ppm	0.0926	0.32	79120.0000	29.3000 (ppm)
Mn (259.372 nm)	0.1896	ppm	0.0011	0.59	17670.0000	0.1896 (ppm)
Mo (204.598 nm)	0.0035	ppm	0.0002	5.93	11.8400	0.0035 (ppm)
Na (589.592 nm)	80.6300	ppm	0.4953	0.61	426000.0000	80.6300 (ppm)
Ni (231.604 nm)	-0.0007 u	ppm	0.0016	> 100.00	-16.6200	-0.0007 u (ppm)
P (213.618 nm)	-0.0066 u	ppm	0.0060	91.12	-1.9020	-0.0066 u (ppm)
Pb (220.353 nm)	0.0014	ppm	0.0017	> 100.00	12.6900	0.0014 (ppm)
Sb (206.834 nm)	0.0023	ppm	0.0007	30.05	4.7440	0.0023 (ppm)
Se (196.026 nm)	0.0022 u	ppm	0.0050	> 100.00	2.4610	0.0022 u (ppm)
Si (251.611 nm)	11.6700	ppm	0.0391	0.34	24320.0000	11.6700 (ppm)
Sn (189.925 nm)	-0.0012 u	ppm	0.0061	> 100.00	-1.0000	-0.0012 u (ppm)
Sr (421.552 nm)	1.2520	ppm	0.0020	0.16	434000.0000	1.2520 (ppm)
Ti (336.122 nm)	0.0020	ppm	0.0002	12.09	-43.3900	0.0020 (ppm)
Tl (190.794 nm)	0.0073	ppm	0.0035	47.92	13.4600	0.0073 (ppm)
V (292.401 nm)	-0.0029 u	ppm	0.0001	3.88	108.3000	-0.0029 u (ppm)
W (207.912 nm)	0.0035	ppm	0.0018	49.87	-0.9607	0.0035 (ppm)
Zn (202.548 nm)	0.0505	ppm	0.0002	0.46	767.8000	0.0505 (ppm)
Zr (343.823 nm)	0.0043	ppm	0.0000	0.97	1181.0000	0.0043 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9336	353300.0000	0.0014	0.15
Y_R 371.029	0.9604	48710.0000	0.0065	0.68

Sample Name: 440-258523-a-10 BC unpr

Date: 1/15/2020 2:17:45 PM

Rack:Tube: 2:6

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0007 u	ppm	0.0003	39.64	7.5460	-0.0007 u (ppm)
Al (396.152 nm)	0.0207	ppm	0.0001	0.40	393.1000	0.0207 (ppm)
As (188.980 nm)	0.0011 u	ppm	0.0041	> 100.00	-1.0020	0.0011 u (ppm)
B (249.678 nm)	0.1645	ppm	0.0000	0.02	1747.0000	0.1645 (ppm)
Ba (233.527 nm)	0.0669	ppm	0.0005	0.71	5777.0000	0.0669 (ppm)
Be (234.861 nm)	0.0001	ppm	0.0001	45.37	35.2100	0.0001 (ppm)
Ca (422.673 nm)	113.8000	ppm	0.0503	0.04	443800.0000	113.8000 (ppm)
Cd (214.439 nm)	0.0001 u	ppm	0.0002	> 100.00	-4.0770	0.0001 u (ppm)
Co (228.615 nm)	0.0007	ppm	0.0001	16.23	2.6210	0.0007 (ppm)
Cr (205.560 nm)	-0.0007 u	ppm	0.0002	23.75	-1.0610	-0.0007 u (ppm)
Cu (324.754 nm)	0.0097	ppm	0.0013	13.93	430.4000	0.0097 (ppm)
Fe (238.204 nm)	0.0086	ppm	0.0022	25.52	-31.2600	0.0086 (ppm)
K (766.491 nm)	5.9480	ppm	0.1026	1.72	5954.0000	5.9480 (ppm)
Li (670.783 nm)	0.0017	ppm	0.0011	66.22	456.2000	0.0017 (ppm)
Mg (279.078 nm)	32.9400	ppm	0.3026	0.92	88940.0000	32.9400 (ppm)
Mn (259.372 nm)	0.2126	ppm	0.0010	0.47	19800.0000	0.2126 (ppm)
Mo (204.598 nm)	0.0013	ppm	0.0015	> 100.00	3.4310	0.0013 (ppm)
Na (589.592 nm)	88.4800	ppm	0.4328	0.49	467400.0000	88.4800 (ppm)
Ni (231.604 nm)	-0.0017 u	ppm	0.0005	28.32	-21.3000	-0.0017 u (ppm)
P (213.618 nm)	-0.0074 u	ppm	0.0083	> 100.00	-2.7180	-0.0074 u (ppm)
Pb (220.353 nm)	0.0023	ppm	0.0017	72.92	14.6900	0.0023 (ppm)
Sb (206.834 nm)	0.0003 u	ppm	0.0045	> 100.00	3.0760	0.0003 u (ppm)
Se (196.026 nm)	0.0061	ppm	0.0044	71.43	4.7620	0.0061 (ppm)
Si (251.611 nm)	13.1500	ppm	0.0182	0.14	27400.0000	13.1500 (ppm)
Sn (189.925 nm)	-0.0001 u	ppm	0.0013	> 100.00	-0.3294	-0.0001 u (ppm)
Sr (421.552 nm)	1.3770	ppm	0.0030	0.22	477200.0000	1.3770 (ppm)
Ti (336.122 nm)	-0.0004 u	ppm	0.0001	19.88	-284.9000	-0.0004 u (ppm)
Tl (190.794 nm)	0.0050	ppm	0.0039	78.92	10.9100	0.0050 (ppm)
V (292.401 nm)	-0.0034 u	ppm	0.0001	2.40	107.0000	-0.0034 u (ppm)
W (207.912 nm)	-0.0056 u	ppm	0.0029	51.85	-15.8800	-0.0056 u (ppm)
Zn (202.548 nm)	0.0628	ppm	0.0011	1.75	955.7000	0.0628 (ppm)
Zr (343.823 nm)	0.0009	ppm	0.0001	6.63	905.7000	0.0009 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9596	363200.0000	0.0028	0.29
Y_R 371.029	0.9814	49780.0000	0.0006	0.06

Sample Name: 440-258523-c-10 BC unpr

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Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0012 u	ppm	0.0001	8.36	-8.6850	-0.0012 u (ppm)
Al (396.152 nm)	0.0187	ppm	0.0027	14.30	329.3000	0.0187 (ppm)
As (188.980 nm)	0.0031	ppm	0.0004	13.44	0.2027	0.0031 (ppm)
B (249.678 nm)	0.1639	ppm	0.0003	0.17	1740.0000	0.1639 (ppm)
Ba (233.527 nm)	0.0644	ppm	0.0001	0.12	5565.0000	0.0644 (ppm)
Be (234.861 nm)	0.0000 u	ppm	0.0001	> 100.00	17.1600	0.0000 u (ppm)
Ca (422.673 nm)	112.7000	ppm	0.3294	0.29	439700.0000	112.7000 (ppm)
Cd (214.439 nm)	0.0001	ppm	0.0001	43.18	-3.2350	0.0001 (ppm)
Co (228.615 nm)	0.0010	ppm	0.0004	40.50	6.2680	0.0010 (ppm)
Cr (205.560 nm)	0.0002 u	ppm	0.0004	> 100.00	2.8210	0.0002 u (ppm)
Cu (324.754 nm)	0.0110	ppm	0.0001	1.27	481.7000	0.0110 (ppm)
Fe (238.204 nm)	0.0151	ppm	0.0007	4.38	-15.0000	0.0151 (ppm)
K (766.491 nm)	5.9120	ppm	0.0647	1.09	5917.0000	5.9120 (ppm)
Li (670.783 nm)	0.0029	ppm	0.0008	27.30	523.2000	0.0029 (ppm)
Mg (279.078 nm)	32.3500	ppm	0.0238	0.07	87340.0000	32.3500 (ppm)
Mn (259.372 nm)	0.2061	ppm	0.0003	0.15	19200.0000	0.2061 (ppm)
Mo (204.598 nm)	-0.0004 u	ppm	0.0011	> 100.00	-3.3310	-0.0004 u (ppm)
Na (589.592 nm)	87.5300	ppm	0.9849	1.13	462400.0000	87.5300 (ppm)
Ni (231.604 nm)	-0.0006 u	ppm	0.0004	67.89	-16.4300	-0.0006 u (ppm)
P (213.618 nm)	-0.0058 u	ppm	0.0029	50.55	-1.5320	-0.0058 u (ppm)
Pb (220.353 nm)	0.0019	ppm	0.0010	53.77	13.8100	0.0019 (ppm)
Sb (206.834 nm)	-0.0003 u	ppm	0.0023	> 100.00	2.5850	-0.0003 u (ppm)
Se (196.026 nm)	0.0040	ppm	0.0005	11.35	3.5030	0.0040 (ppm)
Si (251.611 nm)	12.9700	ppm	0.0071	0.05	27010.0000	12.9700 (ppm)
Sn (189.925 nm)	-0.0060 u	ppm	0.0018	29.67	-3.7500	-0.0060 u (ppm)
Sr (421.552 nm)	1.3590	ppm	0.0073	0.54	470900.0000	1.3590 (ppm)
Ti (336.122 nm)	-0.0004 u	ppm	0.0000	11.46	-288.5000	-0.0004 u (ppm)
Tl (190.794 nm)	0.0052	ppm	0.0002	4.79	11.1300	0.0052 (ppm)
V (292.401 nm)	-0.0029 u	ppm	0.0004	14.30	119.2000	-0.0029 u (ppm)
W (207.912 nm)	-0.0031 u	ppm	0.0009	29.22	-11.8700	-0.0031 u (ppm)
Zn (202.548 nm)	0.0507	ppm	0.0006	1.11	770.0000	0.0507 (ppm)
Zr (343.823 nm)	0.0011	ppm	0.0000	2.56	920.9000	0.0011 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9500	359600.0000	0.0037	0.39
Y_R 371.029	0.9697	49190.0000	0.0045	0.46

Sample Name: 440-258523-f-10 BC

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Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0010 u	ppm	0.0003	25.92	-2.1970	-0.0010 u (ppm)
Al (396.152 nm)	0.0173	ppm	0.0005	2.97	288.6000	0.0173 (ppm)
As (188.980 nm)	-0.0022 u	ppm	0.0010	43.65	-3.0540	-0.0022 u (ppm)
B (249.678 nm)	0.1644	ppm	0.0009	0.56	1745.0000	0.1644 (ppm)
Ba (233.527 nm)	0.0637	ppm	0.0008	1.21	5510.0000	0.0637 (ppm)
Be (234.861 nm)	0.0000 u	ppm	0.0000	> 100.00	15.7500	0.0000 u (ppm)
Ca (422.673 nm)	113.7000	ppm	0.2628	0.23	443300.0000	113.7000 (ppm)
Cd (214.439 nm)	0.0001	ppm	0.0001	39.79	-3.6450	0.0001 (ppm)
Co (228.615 nm)	0.0005	ppm	0.0004	78.88	-0.2379	0.0005 (ppm)
Cr (205.560 nm)	0.0003	ppm	0.0002	57.79	3.3360	0.0003 (ppm)
Cu (324.754 nm)	0.0053	ppm	0.0001	1.71	259.0000	0.0053 (ppm)
Fe (238.204 nm)	0.0181	ppm	0.0044	24.30	-7.2590	0.0181 (ppm)
K (766.491 nm)	5.9550	ppm	0.0713	1.20	5961.0000	5.9550 (ppm)
Li (670.783 nm)	0.0029	ppm	0.0020	69.19	525.8000	0.0029 (ppm)
Mg (279.078 nm)	32.2900	ppm	0.0917	0.28	87200.0000	32.2900 (ppm)
Mn (259.372 nm)	0.2075	ppm	0.0001	0.03	19330.0000	0.2075 (ppm)
Mo (204.598 nm)	-0.0005 u	ppm	0.0002	31.30	-3.8120	-0.0005 u (ppm)
Na (589.592 nm)	88.4400	ppm	0.1172	0.13	467200.0000	88.4400 (ppm)
Ni (231.604 nm)	0.0003 u	ppm	0.0025	> 100.00	-12.3100	0.0003 u (ppm)
P (213.618 nm)	-0.0104 u	ppm	0.0001	0.48	-4.8520	-0.0104 u (ppm)
Pb (220.353 nm)	0.0044	ppm	0.0005	10.93	18.7800	0.0044 (ppm)
Sb (206.834 nm)	-0.0025 u	ppm	0.0056	> 100.00	0.5765	-0.0025 u (ppm)
Se (196.026 nm)	0.0134	ppm	0.0052	38.91	9.2080	0.0134 (ppm)
Si (251.611 nm)	13.0300	ppm	0.0307	0.24	27140.0000	13.0300 (ppm)
Sn (189.925 nm)	-0.0046 u	ppm	0.0047	> 100.00	-2.9480	-0.0046 u (ppm)
Sr (421.552 nm)	1.3680	ppm	0.0019	0.14	474100.0000	1.3680 (ppm)
Ti (336.122 nm)	-0.0004 u	ppm	0.0002	41.08	-291.3000	-0.0004 u (ppm)
Tl (190.794 nm)	-0.0003 u	ppm	0.0014	> 100.00	4.9970	-0.0003 u (ppm)
V (292.401 nm)	-0.0031 u	ppm	0.0001	2.39	113.4000	-0.0031 u (ppm)
W (207.912 nm)	-0.0037 u	ppm	0.0037	99.44	-13.0400	-0.0037 u (ppm)
Zn (202.548 nm)	0.0391	ppm	0.0000	0.12	589.9000	0.0391 (ppm)
Zr (343.823 nm)	0.0012	ppm	0.0001	4.30	930.7000	0.0012 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9401	355800.0000	0.0026	0.28
Y_R 371.029	0.9661	49000.0000	0.0007	0.07

Sample Name: 440-258523-e-10 BC

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Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0011 u	ppm	0.0003	23.29	-6.4530	-0.0011 u (ppm)
Al (396.152 nm)	0.0196	ppm	0.0017	8.58	355.4000	0.0196 (ppm)
As (188.980 nm)	0.0003 u	ppm	0.0039	> 100.00	-1.5430	0.0003 u (ppm)
B (249.678 nm)	0.1641	ppm	0.0004	0.27	1743.0000	0.1641 (ppm)
Ba (233.527 nm)	0.0646	ppm	0.0004	0.62	5589.0000	0.0646 (ppm)
Be (234.861 nm)	0.0000 u	ppm	0.0000	> 100.00	12.9900	0.0000 u (ppm)
Ca (422.673 nm)	113.1000	ppm	0.0865	0.08	441000.0000	113.1000 (ppm)
Cd (214.439 nm)	0.0003	ppm	0.0001	23.08	0.2000	0.0003 (ppm)
Co (228.615 nm)	0.0004	ppm	0.0002	62.42	-1.3670	0.0004 (ppm)
Cr (205.560 nm)	-0.0001 u	ppm	0.0006	> 100.00	1.5810	-0.0001 u (ppm)
Cu (324.754 nm)	0.0104	ppm	0.0007	6.69	460.2000	0.0104 (ppm)
Fe (238.204 nm)	0.0177	ppm	0.0015	8.30	-8.4740	0.0177 (ppm)
K (766.491 nm)	5.8430	ppm	0.0165	0.28	5847.0000	5.8430 (ppm)
Li (670.783 nm)	0.0047	ppm	0.0010	21.28	630.6000	0.0047 (ppm)
Mg (279.078 nm)	32.3600	ppm	0.2536	0.78	87390.0000	32.3600 (ppm)
Mn (259.372 nm)	0.2070	ppm	0.0001	0.05	19280.0000	0.2070 (ppm)
Mo (204.598 nm)	0.0005 u	ppm	0.0011	> 100.00	0.2889	0.0005 u (ppm)
Na (589.592 nm)	88.0300	ppm	0.2719	0.31	465100.0000	88.0300 (ppm)
Ni (231.604 nm)	0.0006	ppm	0.0006	> 100.00	-11.3300	0.0006 (ppm)
P (213.618 nm)	-0.0017 u	ppm	0.0035	> 100.00	1.5290	-0.0017 u (ppm)
Pb (220.353 nm)	0.0009	ppm	0.0003	27.63	12.0100	0.0009 (ppm)
Sb (206.834 nm)	-0.0014 u	ppm	0.0014	> 100.00	1.5670	-0.0014 u (ppm)
Se (196.026 nm)	0.0063	ppm	0.0080	> 100.00	4.8760	0.0063 (ppm)
Si (251.611 nm)	13.0400	ppm	0.0146	0.11	27170.0000	13.0400 (ppm)
Sn (189.925 nm)	-0.0071 u	ppm	0.0004	6.08	-4.3690	-0.0071 u (ppm)
Sr (421.552 nm)	1.3610	ppm	0.0015	0.11	471900.0000	1.3610 (ppm)
Ti (336.122 nm)	-0.0003 u	ppm	0.0002	46.46	-281.2000	-0.0003 u (ppm)
Tl (190.794 nm)	0.0056	ppm	0.0010	18.26	11.6200	0.0056 (ppm)
V (292.401 nm)	-0.0031 u	ppm	0.0002	7.22	115.2000	-0.0031 u (ppm)
W (207.912 nm)	-0.0027 u	ppm	0.0016	58.19	-11.4500	-0.0027 u (ppm)
Zn (202.548 nm)	0.0358	ppm	0.0002	0.55	540.8000	0.0358 (ppm)
Zr (343.823 nm)	0.0013	ppm	0.0001	9.24	936.4000	0.0013 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9339	353500.0000	0.0035	0.38
Y_R 371.029	0.9565	48510.0000	0.0026	0.28

Sample Name: 440-258523-a-10 BC

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Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0010 u	ppm	0.0005	52.27	-3.6860	-0.0010 u (ppm)
Al (396.152 nm)	0.0165	ppm	0.0004	2.34	261.2000	0.0165 (ppm)
As (188.980 nm)	-0.0009 u	ppm	0.0011	> 100.00	-2.2600	-0.0009 u (ppm)
B (249.678 nm)	0.1623	ppm	0.0058	3.56	1723.0000	0.1623 (ppm)
Ba (233.527 nm)	0.0631	ppm	0.0005	0.82	5458.0000	0.0631 (ppm)
Be (234.861 nm)	0.0000	ppm	0.0000	13.24	15.8100	0.0000 (ppm)
Ca (422.673 nm)	110.9000	ppm	0.4134	0.37	432500.0000	110.9000 (ppm)
Cd (214.439 nm)	0.0003	ppm	0.0001	59.17	-0.9517	0.0003 (ppm)
Co (228.615 nm)	0.0005 u	ppm	0.0010	> 100.00	0.5149	0.0005 u (ppm)
Cr (205.560 nm)	0.0000 u	ppm	0.0001	> 100.00	1.8900	0.0000 u (ppm)
Cu (324.754 nm)	0.0045	ppm	0.0001	2.64	230.7000	0.0045 (ppm)
Fe (238.204 nm)	0.0039	ppm	0.0014	36.40	-43.3000	0.0039 (ppm)
K (766.491 nm)	5.8430	ppm	0.0507	0.87	5846.0000	5.8430 (ppm)
Li (670.783 nm)	0.0014	ppm	0.0001	10.19	435.3000	0.0014 (ppm)
Mg (279.078 nm)	31.7000	ppm	0.3557	1.12	85600.0000	31.7000 (ppm)
Mn (259.372 nm)	0.2046	ppm	0.0063	3.10	19050.0000	0.2046 (ppm)
Mo (204.598 nm)	0.0000 u	ppm	0.0002	> 100.00	-1.6700	0.0000 u (ppm)
Na (589.592 nm)	86.1000	ppm	0.0011	0.00	454900.0000	86.1000 (ppm)
Ni (231.604 nm)	-0.0005 u	ppm	0.0005	93.28	-15.8800	-0.0005 u (ppm)
P (213.618 nm)	-0.0034 u	ppm	0.0055	> 100.00	0.4850	-0.0034 u (ppm)
Pb (220.353 nm)	0.0008 u	ppm	0.0012	> 100.00	11.7500	0.0008 u (ppm)
Sb (206.834 nm)	-0.0021 u	ppm	0.0024	> 100.00	0.9395	-0.0021 u (ppm)
Se (196.026 nm)	0.0050	ppm	0.0005	11.07	4.0930	0.0050 (ppm)
Si (251.611 nm)	12.8500	ppm	0.4097	3.19	26770.0000	12.8500 (ppm)
Sn (189.925 nm)	-0.0057 u	ppm	0.0053	94.00	-3.5550	-0.0057 u (ppm)
Sr (421.552 nm)	1.3350	ppm	0.0057	0.43	462700.0000	1.3350 (ppm)
Ti (336.122 nm)	-0.0005 u	ppm	0.0001	16.86	-292.1000	-0.0005 u (ppm)
Tl (190.794 nm)	0.0084	ppm	0.0030	35.59	14.6200	0.0084 (ppm)
V (292.401 nm)	-0.0029 u	ppm	0.0003	11.83	116.8000	-0.0029 u (ppm)
W (207.912 nm)	-0.0022 u	ppm	0.0039	> 100.00	-10.3700	-0.0022 u (ppm)
Zn (202.548 nm)	0.0561	ppm	0.0020	3.61	852.8000	0.0561 (ppm)
Zr (343.823 nm)	0.0014	ppm	0.0004	26.80	946.5000	0.0014 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9286	351500.0000	0.0257	2.76
Y_R 371.029	0.9584	48610.0000	0.0077	0.80

Sample Name: 440-258527-C-1 bc

Date: 1/15/2020 2:28:45 PM

Rack:Tube: 2:10

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0014 u	ppm	0.0000	2.94	-29.0900	-0.0014 u (ppm)
Al (396.152 nm)	0.3992	ppm	0.0002	0.06	12200.0000	0.3992 (ppm)
As (188.980 nm)	0.0836	ppm	0.0013	1.55	48.6200	0.0836 (ppm)
B (249.678 nm)	2.2800	ppm	0.0150	0.66	24350.0000	2.2800 (ppm)
Ba (233.527 nm)	0.0224	ppm	0.0001	0.51	1992.0000	0.0224 (ppm)
Be (234.861 nm)	0.0000 u	ppm	0.0000	48.14	14.6300	0.0000 u (ppm)
Ca (422.673 nm)	258.9000	ppm	1.3150	0.51	1010000.0000	258.9000 (ppm)
Cd (214.439 nm)	-0.0002 u	ppm	0.0005	> 100.00	-10.1700	-0.0002 u (ppm)
Co (228.615 nm)	0.0187	ppm	0.0009	4.76	238.6000	0.0187 (ppm)
Cr (205.560 nm)	0.0040	ppm	0.0003	7.77	20.9300	0.0040 (ppm)
Cu (324.754 nm)	0.0010	ppm	0.0004	44.38	-8.8640	0.0010 (ppm)
Fe (238.204 nm)	0.0935	ppm	0.0057	6.13	188.7000	0.0935 (ppm)
K (766.491 nm)	20.7600	ppm	0.0119	0.06	21090.0000	20.7600 (ppm)
Li (670.783 nm)	0.2865	ppm	0.0011	0.38	17180.0000	0.2865 (ppm)
Mg (279.078 nm)	119.2000	ppm	0.4978	0.42	321900.0000	119.2000 (ppm)
Mn (259.372 nm)	0.2658	ppm	0.0004	0.14	25110.0000	0.2658 (ppm)
Mo (204.598 nm)	0.1944	ppm	0.0055	2.82	747.0000	0.1944 (ppm)
Na (589.592 nm)	1021.0000 o	ppm	8.9350	0.88	5383000.0000	1021.0000 o (ppm)
Ni (231.604 nm)	0.0213	ppm	0.0014	6.34	77.0700	0.0213 (ppm)
P (213.618 nm)	1.2220	ppm	0.0062	0.51	910.5000	1.2220 (ppm)
Pb (220.353 nm)	0.0010 u	ppm	0.0058	> 100.00	14.5800	0.0010 u (ppm)
Sb (206.834 nm)	-0.0119 u	ppm	0.0023	19.34	-10.6100	-0.0119 u (ppm)
Se (196.026 nm)	0.0105	ppm	0.0027	25.33	6.7530	0.0105 (ppm)
Si (251.611 nm)	37.8000	ppm	0.1474	0.39	78750.0000	37.8000 (ppm)
Sn (189.925 nm)	-0.0096 u	ppm	0.0107	> 100.00	-5.6550	-0.0096 u (ppm)
Sr (421.552 nm)	7.0220	ppm	0.0291	0.41	2431000.0000	7.0220 (ppm)
Ti (336.122 nm)	-0.0009 u	ppm	0.0001	15.16	-461.5000	-0.0009 u (ppm)
Tl (190.794 nm)	0.0037	ppm	0.0012	32.50	8.0810	0.0037 (ppm)
V (292.401 nm)	0.0459	ppm	0.0007	1.63	1734.0000	0.0459 (ppm)
W (207.912 nm)	-0.0056 u	ppm	0.0003	4.53	-18.5900	-0.0056 u (ppm)
Zn (202.548 nm)	0.0243	ppm	0.0004	1.60	353.9000	0.0243 (ppm)
Zr (343.823 nm)	0.0045	ppm	0.0006	12.65	1220.0000	0.0045 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.8378	317100.0000	0.0054	0.64
Y_R 371.029	0.8892	45100.0000	0.0077	0.86

Sample Name: 440-258527-C-2 bc

Date: 1/15/2020 2:30:57 PM

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Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0019 u	ppm	0.0003	16.23	-52.0200	-0.0019 u (ppm)
Al (396.152 nm)	0.0373	ppm	0.0010	2.80	1179.0000	0.0373 (ppm)
As (188.980 nm)	0.1391	ppm	0.0014	1.03	79.5400	0.1391 (ppm)
B (249.678 nm)	2.3800	ppm	0.0007	0.03	25420.0000	2.3800 (ppm)
Ba (233.527 nm)	0.0209	ppm	0.0006	2.68	1864.0000	0.0209 (ppm)
Be (234.861 nm)	0.0000 u	ppm	0.0000	27.94	9.4750	0.0000 u (ppm)
Ca (422.673 nm)	265.6000	ppm	0.0895	0.03	1036000.0000	265.6000 (ppm)
Cd (214.439 nm)	-0.0001 u	ppm	0.0003	> 100.00	-9.5600	-0.0001 u (ppm)
Co (228.615 nm)	0.0119	ppm	0.0002	1.82	151.6000	0.0119 (ppm)
Cr (205.560 nm)	0.3650	ppm	0.0023	0.64	1624.0000	0.3650 (ppm)
Cu (324.754 nm)	0.0064	ppm	0.0001	1.63	200.3000	0.0064 (ppm)
Fe (238.204 nm)	0.0648	ppm	0.0048	7.36	116.5000	0.0648 (ppm)
K (766.491 nm)	21.7600	ppm	0.0388	0.18	22100.0000	21.7600 (ppm)
Li (670.783 nm)	0.2948	ppm	0.0029	1.00	17670.0000	0.2948 (ppm)
Mg (279.078 nm)	122.1000	ppm	1.3160	1.08	329600.0000	122.1000 (ppm)
Mn (259.372 nm)	0.2278	ppm	0.0004	0.17	21570.0000	0.2278 (ppm)
Mo (204.598 nm)	0.1227	ppm	0.0027	2.20	471.0000	0.1227 (ppm)
Na (589.592 nm)	1031.0000 o	ppm	3.6040	0.35	5436000.0000	1031.0000 o (ppm)
Ni (231.604 nm)	0.0133	ppm	0.0010	7.22	41.9000	0.0133 (ppm)
P (213.618 nm)	0.0835	ppm	0.0037	4.40	62.1000	0.0835 (ppm)
Pb (220.353 nm)	0.0047	ppm	0.0016	33.25	22.1400	0.0047 (ppm)
Sb (206.834 nm)	0.0075	ppm	0.0085	> 100.00	10.9900	0.0075 (ppm)
Se (196.026 nm)	0.0220	ppm	0.0018	8.11	13.6600	0.0220 (ppm)
Si (251.611 nm)	38.3400	ppm	0.1951	0.51	79880.0000	38.3400 (ppm)
Sn (189.925 nm)	-0.0113 u	ppm	0.0021	18.70	-6.6160	-0.0113 u (ppm)
Sr (421.552 nm)	7.2220	ppm	0.0022	0.03	2500000.0000	7.2220 (ppm)
Ti (336.122 nm)	-0.0010 u	ppm	0.0002	23.91	-478.2000	-0.0010 u (ppm)
Tl (190.794 nm)	0.0117	ppm	0.0033	28.23	16.7700	0.0117 (ppm)
V (292.401 nm)	0.0522	ppm	0.0023	4.43	1955.0000	0.0522 (ppm)
W (207.912 nm)	-0.0047 u	ppm	0.0046	97.44	-17.3300	-0.0047 u (ppm)
Zn (202.548 nm)	0.0201	ppm	0.0006	3.00	280.2000	0.0201 (ppm)
Zr (343.823 nm)	0.0036	ppm	0.0002	5.56	1145.0000	0.0036 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.8359	316400.0000	0.0065	0.78
Y_R 371.029	0.8917	45230.0000	0.0020	0.22

Sample Name: CCV 6043773

Date: 1/15/2020 2:38:01 PM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

**Analyte Results**

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.5077	ppm	0.0017	0.33	20490.0000	0.5077 (ppm)
Al (396.152 nm)	1.0170	ppm	0.0023	0.23	31620.0000	1.0170 (ppm)
As (188.980 nm)	1.0240	ppm	0.0067	0.65	614.4000	1.0240 (ppm)
B (249.678 nm)	1.0260	ppm	0.0036	0.35	10850.0000	1.0260 (ppm)
Ba (233.527 nm)	1.0190	ppm	0.0000	0.00	87130.0000	1.0190 (ppm)
Be (234.861 nm)	1.0240	ppm	0.0018	0.18	160600.0000	1.0240 (ppm)
Ca (422.673 nm)	5.0940	ppm	0.0018	0.04	19940.0000	5.0940 (ppm)
Cd (214.439 nm)	1.0270	ppm	0.0025	0.24	22170.0000	1.0270 (ppm)
Co (228.615 nm)	1.0250	ppm	0.0055	0.54	13240.0000	1.0250 (ppm)
Cr (205.560 nm)	1.0230	ppm	0.0014	0.13	4542.0000	1.0230 (ppm)
Cu (324.754 nm)	1.0320	ppm	0.0030	0.29	40500.0000	1.0320 (ppm)
Fe (238.204 nm)	1.0150	ppm	0.0036	0.36	2505.0000	1.0150 (ppm)
K (766.491 nm)	10.1500	ppm	0.0280	0.28	10220.0000	10.1500 (ppm)
Li (670.783 nm)	1.0100	ppm	0.0031	0.31	57530.0000	1.0100 (ppm)
Mg (279.078 nm)	5.1530	ppm	0.0174	0.34	13920.0000	5.1530 (ppm)
Mn (259.372 nm)	1.0210	ppm	0.0019	0.18	94950.0000	1.0210 (ppm)
Mo (204.598 nm)	1.0290	ppm	0.0016	0.16	3965.0000	1.0290 (ppm)
Na (589.592 nm)	10.3100	ppm	0.0280	0.27	55310.0000	10.3100 (ppm)
Ni (231.604 nm)	1.0240	ppm	0.0027	0.26	4481.0000	1.0240 (ppm)
P (213.618 nm)	1.0170	ppm	0.0026	0.25	717.8000	1.0170 (ppm)
Pb (220.353 nm)	1.0240	ppm	0.0040	0.39	2030.0000	1.0240 (ppm)
Sb (206.834 nm)	1.0350	ppm	0.0088	0.85	907.2000	1.0350 (ppm)
Se (196.026 nm)	1.0230	ppm	0.0002	0.02	629.8000	1.0230 (ppm)
Si (251.611 nm)	5.1270	ppm	0.0504	0.98	10840.0000	5.1270 (ppm)
Sn (189.925 nm)	1.0220	ppm	0.0036	0.35	589.0000	1.0220 (ppm)
Sr (421.552 nm)	1.0140	ppm	0.0018	0.18	350800.0000	1.0140 (ppm)
Ti (336.122 nm)	1.0250	ppm	0.0057	0.56	102800.0000	1.0250 (ppm)
Tl (190.794 nm)	1.0250	ppm	0.0041	0.40	1109.0000	1.0250 (ppm)
V (292.401 nm)	1.0230	ppm	0.0022	0.21	31090.0000	1.0230 (ppm)
W (207.912 nm)	1.0250	ppm	0.0032	0.31	1675.0000	1.0250 (ppm)
Zn (202.548 nm)	1.0300	ppm	0.0018	0.17	15970.0000	1.0300 (ppm)
Zr (343.823 nm)	1.0110	ppm	0.0052	0.51	82550.0000	1.0110 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9474	358600.0000	0.0027	0.28
Y_R 371.029	0.9623	48810.0000	0.0003	0.03

Sample Name: CCB 6043772

Date: 1/15/2020 2:40:14 PM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0001 u	ppm	0.0002	> 100.00	41.8500	-0.0001 u (ppm)
Al (396.152 nm)	0.0005	ppm	0.0006	> 100.00	-298.7000	0.0005 (ppm)
As (188.980 nm)	0.0023	ppm	0.0028	> 100.00	0.0794	0.0023 (ppm)
B (249.678 nm)	0.0017	ppm	0.0008	49.91	4.7660	0.0017 (ppm)
Ba (233.527 nm)	0.0005	ppm	0.0001	26.08	105.4000	0.0005 (ppm)
Be (234.861 nm)	0.0005	ppm	0.0002	39.18	86.7700	0.0005 (ppm)
Ca (422.673 nm)	0.0061	ppm	0.0015	25.08	104.1000	0.0061 (ppm)
Cd (214.439 nm)	0.0004	ppm	0.0001	36.27	1.9830	0.0004 (ppm)
Co (228.615 nm)	0.0002	ppm	0.0002	97.11	-5.7920	0.0002 (ppm)
Cr (205.560 nm)	0.0006 u	ppm	0.0010	> 100.00	3.1810	0.0006 u (ppm)
Cu (324.754 nm)	0.0009	ppm	0.0002	21.29	170.3000	0.0009 (ppm)
Fe (238.204 nm)	0.0026	ppm	0.0001	3.11	-49.0700	0.0026 (ppm)
K (766.491 nm)	0.0076 u	ppm	0.1692	> 100.00	-117.9000	0.0076 u (ppm)
Li (670.783 nm)	-0.0007 u	ppm	0.0007	99.52	87.3900	-0.0007 u (ppm)
Mg (279.078 nm)	0.0067	ppm	0.0007	10.19	32.2700	0.0067 (ppm)
Mn (259.372 nm)	0.0004	ppm	0.0001	22.82	89.8800	0.0004 (ppm)
Mo (204.598 nm)	0.0130	ppm	0.0007	5.33	48.2000	0.0130 (ppm)
Na (589.592 nm)	0.0733	ppm	0.0005	0.72	1288.0000	0.0733 (ppm)
Ni (231.604 nm)	-0.0002 u	ppm	0.0012	> 100.00	-12.6900	-0.0002 u (ppm)
P (213.618 nm)	-0.0044 u	ppm	0.0008	18.80	0.6048	-0.0044 u (ppm)
Pb (220.353 nm)	0.0026	ppm	0.0001	3.41	13.8400	0.0026 (ppm)
Sb (206.834 nm)	0.0022 u	ppm	0.0067	> 100.00	4.3450	0.0022 u (ppm)
Se (196.026 nm)	0.0081	ppm	0.0015	18.58	6.4820	0.0081 (ppm)
Si (251.611 nm)	0.0038	ppm	0.0007	19.51	8.3020	0.0038 (ppm)
Sn (189.925 nm)	-0.0004 u	ppm	0.0010	> 100.00	-0.5603	-0.0004 u (ppm)
Sr (421.552 nm)	0.0004	ppm	0.0001	30.83	106.2000	0.0004 (ppm)
Ti (336.122 nm)	0.0055 Z	ppm	0.0006	11.07	399.0000 Z	0.0055 Z (ppm)
Tl (190.794 nm)	0.0001 u	ppm	0.0004	> 100.00	5.5710	0.0001 u (ppm)
V (292.401 nm)	0.0010	ppm	0.0002	22.42	104.3000	0.0010 (ppm)
W (207.912 nm)	0.0103	ppm	0.0022	21.64	10.9100	0.0103 (ppm)
Zn (202.548 nm)	0.0010	ppm	0.0003	31.04	24.1700	0.0010 (ppm)
Zr (343.823 nm)	0.0006	ppm	0.0001	18.61	867.0000	0.0006 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9612	363800.0000	0.0032	0.33
Y_R 371.029	0.9710	49250.0000	0.0088	0.91

Sample Name: CCB 6043772

Date: 1/15/2020 2:44:15 PM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.0000 u	ppm	0.0002	> 100.00	44.2400	0.0000 u (ppm)
Al (396.152 nm)	0.0010	ppm	0.0009	92.13	-294.4000	0.0010 (ppm)
As (188.980 nm)	0.0060	ppm	0.0037	62.15	2.3020	0.0060 (ppm)
B (249.678 nm)	0.0013	ppm	0.0003	21.31	1.7860	0.0013 (ppm)
Ba (233.527 nm)	0.0001 u	ppm	0.0001	> 100.00	64.5900	0.0001 u (ppm)
Be (234.861 nm)	0.0001	ppm	0.0000	43.49	23.0900	0.0001 (ppm)
Ca (422.673 nm)	0.0000 u	ppm	0.0066	> 100.00	80.2500	0.0000 u (ppm)
Cd (214.439 nm)	0.0000 u	ppm	0.0001	> 100.00	-6.5800	0.0000 u (ppm)
Co (228.615 nm)	-0.0002 u	ppm	0.0000	2.19	-11.7800	-0.0002 u (ppm)
Cr (205.560 nm)	0.0002 u	ppm	0.0007	> 100.00	1.2570	0.0002 u (ppm)
Cu (324.754 nm)	0.0006	ppm	0.0002	25.13	159.8000	0.0006 (ppm)
Fe (238.204 nm)	-0.0019 u	ppm	0.0037	> 100.00	-60.3900	-0.0019 u (ppm)
K (766.491 nm)	0.1378	ppm	0.1165	84.56	14.6800	0.1378 (ppm)
Li (670.783 nm)	0.0002 u	ppm	0.0010	> 100.00	139.1000	0.0002 u (ppm)
Mg (279.078 nm)	0.0022	ppm	0.0021	96.05	20.1500	0.0022 (ppm)
Mn (259.372 nm)	0.0001	ppm	0.0000	82.21	49.2900	0.0001 (ppm)
Mo (204.598 nm)	0.0014	ppm	0.0003	22.64	3.7200	0.0014 (ppm)
Na (589.592 nm)	0.0252	ppm	0.0053	21.20	1034.0000	0.0252 (ppm)
Ni (231.604 nm)	-0.0002 u	ppm	0.0002	84.88	-12.9100	-0.0002 u (ppm)
P (213.618 nm)	-0.0055 u	ppm	0.0010	18.63	-0.0368	-0.0055 u (ppm)
Pb (220.353 nm)	0.0040	ppm	0.0014	34.03	16.6700	0.0040 (ppm)
Sb (206.834 nm)	0.0000 u	ppm	0.0028	> 100.00	2.5740	0.0000 u (ppm)
Se (196.026 nm)	-0.0030 u	ppm	0.0013	44.24	-0.3264	-0.0030 u (ppm)
Si (251.611 nm)	0.0006 u	ppm	0.0021	> 100.00	0.2788	0.0006 u (ppm)
Sn (189.925 nm)	0.0013 u	ppm	0.0027	> 100.00	0.4049	0.0013 u (ppm)
Sr (421.552 nm)	0.0000 u	ppm	0.0001	> 100.00	-37.0300	0.0000 u (ppm)
Ti (336.122 nm)	0.0007	ppm	0.0003	38.62	-92.0400	0.0007 (ppm)
Tl (190.794 nm)	0.0002 u	ppm	0.0029	> 100.00	5.7640	0.0002 u (ppm)
V (292.401 nm)	0.0003	ppm	0.0001	39.82	85.0600	0.0003 (ppm)
W (207.912 nm)	0.0006 u	ppm	0.0023	> 100.00	-4.8800	0.0006 u (ppm)
Zn (202.548 nm)	0.0002	ppm	0.0000	15.24	12.0200	0.0002 (ppm)
Zr (343.823 nm)	0.0003	ppm	0.0001	20.20	842.7000	0.0003 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9704	367300.0000	0.0001	0.01
Y_R 371.029	0.9766	49540.0000	0.0017	0.18

Sample Name: 440-258909-B-43-A SD@25

Date: 1/15/2020 2:46:28 PM

Rack:Tube: 1:22

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0001 u	ppm	0.0003	> 100.00	2.7600	-0.0001 u (ppm)
Al (396.152 nm)	8.6740	ppm	0.0367	0.42	262600.0000	8.6740 (ppm)
As (188.980 nm)	0.0040 u	ppm	0.0080	> 100.00	-0.1928	0.0040 u (ppm)
B (249.678 nm)	0.0039	ppm	0.0002	5.71	1.3010	0.0039 (ppm)
Ba (233.527 nm)	0.0543	ppm	0.0006	1.09	4699.0000	0.0543 (ppm)
Be (234.861 nm)	0.0003	ppm	0.0003	> 100.00	423.6000	0.0003 (ppm)
Ca (422.673 nm)	6.4950	ppm	0.0468	0.72	25400.0000	6.4950 (ppm)
Cd (214.439 nm)	0.0001	ppm	0.0001	98.99	-0.6302	0.0001 (ppm)
Co (228.615 nm)	0.0087	ppm	0.0000	0.28	118.7000	0.0087 (ppm)
Cr (205.560 nm)	0.0096	ppm	0.0001	0.69	43.9200	0.0096 (ppm)
Cu (324.754 nm)	1.7730	ppm	0.0113	0.64	69490.0000	1.7730 (ppm)
Fe (238.204 nm)	23.5100	ppm	0.0042	0.02	59290.0000	23.5100 (ppm)
K (766.491 nm)	1.8110	ppm	0.0660	3.64	1728.0000	1.8110 (ppm)
Li (670.783 nm)	0.0055	ppm	0.0008	15.40	256.1000	0.0055 (ppm)
Mg (279.078 nm)	7.7790	ppm	0.0638	0.82	21000.0000	7.7790 (ppm)
Mn (259.372 nm)	0.1726	ppm	0.0010	0.57	18590.0000	0.1726 (ppm)
Mo (204.598 nm)	0.0020	ppm	0.0006	27.51	7.4210	0.0020 (ppm)
Na (589.592 nm)	0.0975	ppm	0.0136	13.98	1607.0000	0.0975 (ppm)
Ni (231.604 nm)	0.0130	ppm	0.0010	8.06	43.4900	0.0130 (ppm)
P (213.618 nm)	1.0760	ppm	0.0118	1.09	758.2000	1.0760 (ppm)
Pb (220.353 nm)	0.0051	ppm	0.0038	74.91	8.7120	0.0051 (ppm)
Sb (206.834 nm)	0.0072	ppm	0.0000	0.19	9.2700	0.0072 (ppm)
Se (196.026 nm)	0.0090	ppm	0.0012	12.84	1.5890	0.0090 (ppm)
Si (251.611 nm)	0.2360	ppm	0.0000	0.00	495.7000	0.2360 (ppm)
Sn (189.925 nm)	0.0009	ppm	0.0008	88.85	0.1829	0.0009 (ppm)
Sr (421.552 nm)	0.0337	ppm	0.0002	0.64	11670.0000	0.0337 (ppm)
Ti (336.122 nm)	0.5378	ppm	0.0040	0.75	53830.0000	0.5378 (ppm)
Tl (190.794 nm)	-0.0034 u	ppm	0.0018	52.43	-3.2760	-0.0034 u (ppm)
V (292.401 nm)	0.0322	ppm	0.0001	0.38	1081.0000	0.0322 (ppm)
W (207.912 nm)	-0.0026 u	ppm	0.0009	32.94	-10.0500	-0.0026 u (ppm)
Zn (202.548 nm)	0.0290	ppm	0.0003	1.14	658.5000	0.0290 (ppm)
Zr (343.823 nm)	0.0087	ppm	0.0002	1.92	1051.0000	0.0087 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9563	362000.0000	0.0042	0.44
Y_R 371.029	0.9695	49180.0000	0.0079	0.82

Sample Name: 440-258909-B-43-A@5

Date: 1/15/2020 2:48:40 PM

Rack:Tube: 1:23

Weight (g): 1

Volume (mL): 1

Dilution: 1

**Analyte Results**

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.0000 u	ppm	0.0003	> 100.00	-163.6000	0.0000 u (ppm)
Al (396.152 nm)	45.7300	ppm	0.1557	0.34	1386000.0000	45.7300 (ppm)
As (188.980 nm)	0.0113	ppm	0.0029	26.08	-1.1160	0.0113 (ppm)
B (249.678 nm)	0.0083	ppm	0.0005	5.99	-64.8600	0.0083 (ppm)
Ba (233.527 nm)	0.2733	ppm	0.0004	0.13	23430.0000	0.2733 (ppm)
Be (234.861 nm)	0.0013	ppm	0.0003	22.42	2048.0000	0.0013 (ppm)
Ca (422.673 nm)	33.3600	ppm	0.1033	0.31	130100.0000	33.3600 (ppm)
Cd (214.439 nm)	0.0001	ppm	0.0001	> 100.00	14.8700	0.0001 (ppm)
Co (228.615 nm)	0.0419	ppm	0.0001	0.32	612.8000	0.0419 (ppm)
Cr (205.560 nm)	0.0512	ppm	0.0004	0.86	232.8000	0.0512 (ppm)
Cu (324.754 nm)	9.2620	ppm	0.0777	0.84	362300.0000	9.2620 (ppm)
Fe (238.204 nm)	120.1000	ppm	0.5737	0.48	303000.0000	120.1000 (ppm)
K (766.491 nm)	9.0930	ppm	0.0592	0.65	9184.0000	9.0930 (ppm)
Li (670.783 nm)	0.0377	ppm	0.0021	5.55	1332.0000	0.0377 (ppm)
Mg (279.078 nm)	38.9700	ppm	0.0430	0.11	105100.0000	38.9700 (ppm)
Mn (259.372 nm)	0.8664	ppm	0.0037	0.43	93370.0000	0.8664 (ppm)
Mo (204.598 nm)	0.0101	ppm	0.0002	1.90	43.8500	0.0101 (ppm)
Na (589.592 nm)	0.4095	ppm	0.0131	3.19	4043.0000	0.4095 (ppm)
Ni (231.604 nm)	0.0594	ppm	0.0011	1.92	241.1000	0.0594 (ppm)
P (213.618 nm)	5.5220	ppm	0.0102	0.19	3868.0000	5.5220 (ppm)
Pb (220.353 nm)	0.0292	ppm	0.0001	0.35	14.5900	0.0292 (ppm)
Sb (206.834 nm)	0.0007	ppm	0.0002	33.46	4.8810	0.0007 (ppm)
Se (196.026 nm)	0.0201	ppm	0.0012	5.82	-13.8200	0.0201 (ppm)
Si (251.611 nm)	1.2040	ppm	0.0049	0.41	2534.0000	1.2040 (ppm)
Sn (189.925 nm)	-0.0042 u	ppm	0.0003	8.05	-2.7380	-0.0042 u (ppm)
Sr (421.552 nm)	0.1712	ppm	0.0006	0.36	59540.0000	0.1712 (ppm)
Ti (336.122 nm)	2.8310	ppm	0.0128	0.45	284000.0000	2.8310 (ppm)
Tl (190.794 nm)	-0.0308 u	ppm	0.0014	4.62	-55.4000	-0.0308 u (ppm)
V (292.401 nm)	0.1669	ppm	0.0005	0.30	5284.0000	0.1669 (ppm)
W (207.912 nm)	0.0011	ppm	0.0012	> 100.00	-4.0320	0.0011 (ppm)
Zn (202.548 nm)	0.1368	ppm	0.0000	0.03	3178.0000	0.1368 (ppm)
Zr (343.823 nm)	0.0515	ppm	0.0003	0.64	2576.0000	0.0515 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9363	354400.0000	0.0010	0.11
Y_R 371.029	0.9661	49000.0000	0.0016	0.17

Sample Name: 440-258909-B-43-B MS@5

Date: 1/15/2020 2:50:52 PM

Rack:Tube: 1:24

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.1910	ppm	0.0006	0.34	7496.0000	0.1910 (ppm)
Al (396.152 nm)	54.3900	ppm	0.0146	0.03	1648000.0000	54.3900 (ppm)
As (188.980 nm)	0.3986	ppm	0.0092	2.31	230.9000	0.3986 (ppm)
B (249.678 nm)	0.3727	ppm	0.0000	0.01	3779.0000	0.3727 (ppm)
Ba (233.527 nm)	0.7252	ppm	0.0010	0.14	62030.0000	0.7252 (ppm)
Be (234.861 nm)	0.3817	ppm	0.0002	0.04	61970.0000	0.3817 (ppm)
Ca (422.673 nm)	35.3100	ppm	0.0099	0.03	137700.0000	35.3100 (ppm)
Cd (214.439 nm)	0.3742	ppm	0.0004	0.11	8095.0000	0.3742 (ppm)
Co (228.615 nm)	0.4157	ppm	0.0004	0.11	5459.0000	0.4157 (ppm)
Cr (205.560 nm)	0.4326	ppm	0.0002	0.04	1926.0000	0.4326 (ppm)
Cu (324.754 nm)	11.4200	ppm	0.0334	0.29	446800.0000	11.4200 (ppm)
Fe (238.204 nm)	136.2000	ppm	0.1626	0.12	343800.0000	136.2000 (ppm)
K (766.491 nm)	15.6200	ppm	0.1404	0.90	15840.0000	15.6200 (ppm)
Li (670.783 nm)	0.4303	ppm	0.0004	0.10	23480.0000	0.4303 (ppm)
Mg (279.078 nm)	43.8600	ppm	0.0575	0.13	118300.0000	43.8600 (ppm)
Mn (259.372 nm)	1.3100	ppm	0.0018	0.14	136300.0000	1.3100 (ppm)
Mo (204.598 nm)	0.4173	ppm	0.0011	0.27	1614.0000	0.4173 (ppm)
Na (589.592 nm)	4.3500	ppm	0.0064	0.15	24970.0000	4.3500 (ppm)
Ni (231.604 nm)	0.4325	ppm	0.0023	0.52	1877.0000	0.4325 (ppm)
P (213.618 nm)	5.4230	ppm	0.0687	1.27	3728.0000	5.4230 (ppm)
Pb (220.353 nm)	0.4069	ppm	0.0030	0.73	753.1000	0.4069 (ppm)
Sb (206.834 nm)	0.2951	ppm	0.0021	0.72	261.5000	0.2951 (ppm)
Se (196.026 nm)	0.3860	ppm	0.0050	1.30	206.8000	0.3860 (ppm)
Si (251.611 nm)	2.1590	ppm	0.0101	0.47	4580.0000	2.1590 (ppm)
Sn (189.925 nm)	0.3855	ppm	0.0017	0.44	222.1000	0.3855 (ppm)
Sr (421.552 nm)	0.5554	ppm	0.0007	0.12	192400.0000	0.5554 (ppm)
Ti (336.122 nm)	3.6830	ppm	0.0008	0.02	369600.0000	3.6830 (ppm)
Tl (190.794 nm)	0.3323	ppm	0.0103	3.11	330.7000	0.3323 (ppm)
V (292.401 nm)	0.5521	ppm	0.0010	0.17	16970.0000	0.5521 (ppm)
W (207.912 nm)	0.3081	ppm	0.0010	0.31	500.2000	0.3081 (ppm)
Zn (202.548 nm)	0.5117	ppm	0.0005	0.11	9197.0000	0.5117 (ppm)
Zr (343.823 nm)	0.3857	ppm	0.0017	0.45	29280.0000	0.3857 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9337	353400.0000	0.0025	0.27
Y_R 371.029	0.9510	48240.0000	0.0050	0.52

Sample Name: 440-258909-B-43-C MSD@5

Date: 1/15/2020 2:53:04 PM

Rack:Tube: 1:25

Weight (g): 1

Volume (mL): 1

Dilution: 1

**Analyte Results**

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.1912	ppm	0.0001	0.07	7506.0000	0.1912 (ppm)
Al (396.152 nm)	59.5600	ppm	0.0317	0.05	1805000.0000	59.5600 (ppm)
As (188.980 nm)	0.3957	ppm	0.0000	0.01	229.1000	0.3957 (ppm)
B (249.678 nm)	0.3788	ppm	0.0011	0.28	3845.0000	0.3788 (ppm)
Ba (233.527 nm)	0.7688	ppm	0.0016	0.21	65750.0000	0.7688 (ppm)
Be (234.861 nm)	0.3839	ppm	0.0003	0.07	62310.0000	0.3839 (ppm)
Ca (422.673 nm)	36.5300	ppm	0.1496	0.41	142500.0000	36.5300 (ppm)
Cd (214.439 nm)	0.3765	ppm	0.0002	0.05	8144.0000	0.3765 (ppm)
Co (228.615 nm)	0.4114	ppm	0.0004	0.11	5422.0000	0.4114 (ppm)
Cr (205.560 nm)	0.4370	ppm	0.0000	0.01	1946.0000	0.4370 (ppm)
Cu (324.754 nm)	10.5100	ppm	0.0009	0.01	411100.0000	10.5100 (ppm)
Fe (238.204 nm)	135.8000	ppm	0.1292	0.10	342800.0000	135.8000 (ppm)
K (766.491 nm)	17.5300	ppm	0.0242	0.14	17790.0000	17.5300 (ppm)
Li (670.783 nm)	0.4306	ppm	0.0016	0.36	23590.0000	0.4306 (ppm)
Mg (279.078 nm)	44.5400	ppm	0.0881	0.20	120200.0000	44.5400 (ppm)
Mn (259.372 nm)	1.3320	ppm	0.0008	0.06	138400.0000	1.3320 (ppm)
Mo (204.598 nm)	0.4237	ppm	0.0009	0.21	1639.0000	0.4237 (ppm)
Na (589.592 nm)	4.4330	ppm	0.0173	0.39	25410.0000	4.4330 (ppm)
Ni (231.604 nm)	0.4354	ppm	0.0016	0.38	1890.0000	0.4354 (ppm)
P (213.618 nm)	5.7500	ppm	0.0098	0.17	3997.0000	5.7500 (ppm)
Pb (220.353 nm)	0.4073	ppm	0.0006	0.14	752.9000	0.4073 (ppm)
Sb (206.834 nm)	0.2969	ppm	0.0110	3.69	263.2000	0.2969 (ppm)
Se (196.026 nm)	0.3794	ppm	0.0022	0.57	202.8000	0.3794 (ppm)
Si (251.611 nm)	2.3160	ppm	0.0112	0.48	4915.0000	2.3160 (ppm)
Sn (189.925 nm)	0.3860	ppm	0.0053	1.36	222.3000	0.3860 (ppm)
Sr (421.552 nm)	0.5969	ppm	0.0025	0.41	206800.0000	0.5969 (ppm)
Ti (336.122 nm)	4.4900	ppm	0.0044	0.10	450600.0000	4.4900 (ppm)
Tl (190.794 nm)	0.3278	ppm	0.0090	2.74	315.5000	0.3278 (ppm)
V (292.401 nm)	0.5735	ppm	0.0008	0.14	17640.0000	0.5735 (ppm)
W (207.912 nm)	0.3095	ppm	0.0016	0.51	502.3000	0.3095 (ppm)
Zn (202.548 nm)	0.5176	ppm	0.0002	0.05	9179.0000	0.5176 (ppm)
Zr (343.823 nm)	0.4210	ppm	0.0012	0.29	32140.0000	0.4210 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9345	353700.0000	0.0002	0.02
Y_R 371.029	0.9564	48510.0000	0.0002	0.02

Sample Name: 440-258909-B-43-A PDS@5

Date: 1/15/2020 2:55:16 PM

Rack:Tube: 1:26

Weight (g): 1

Volume (mL): 1

Dilution: 1

**Analyte Results**

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.1952	ppm	0.0004	0.21	7700.0000	0.1952 (ppm)
Al (396.152 nm)	46.6600	ppm	0.0429	0.09	1414000.0000	46.6600 (ppm)
As (188.980 nm)	0.3995	ppm	0.0051	1.29	232.2000	0.3995 (ppm)
B (249.678 nm)	0.3979	ppm	0.0025	0.64	4057.0000	0.3979 (ppm)
Ba (233.527 nm)	0.6695	ppm	0.0095	1.43	57280.0000	0.6695 (ppm)
Be (234.861 nm)	0.3845	ppm	0.0030	0.77	62180.0000	0.3845 (ppm)
Ca (422.673 nm)	35.5800	ppm	0.0079	0.02	138800.0000	35.5800 (ppm)
Cd (214.439 nm)	0.3787	ppm	0.0021	0.55	8190.0000	0.3787 (ppm)
Co (228.615 nm)	0.4143	ppm	0.0036	0.87	5430.0000	0.4143 (ppm)
Cr (205.560 nm)	0.4422	ppm	0.0045	1.01	1968.0000	0.4422 (ppm)
Cu (324.754 nm)	9.6390	ppm	0.0173	0.18	377100.0000	9.6390 (ppm)
Fe (238.204 nm)	121.1000	ppm	0.0667	0.06	305700.0000	121.1000 (ppm)
K (766.491 nm)	13.1100	ppm	0.0507	0.39	13290.0000	13.1100 (ppm)
Li (670.783 nm)	0.4402	ppm	0.0017	0.38	24210.0000	0.4402 (ppm)
Mg (279.078 nm)	41.9000	ppm	0.4900	1.17	113100.0000	41.9000 (ppm)
Mn (259.372 nm)	1.2610	ppm	0.0031	0.25	130200.0000	1.2610 (ppm)
Mo (204.598 nm)	0.4313	ppm	0.0020	0.46	1667.0000	0.4313 (ppm)
Na (589.592 nm)	4.4230	ppm	0.0038	0.09	25240.0000	4.4230 (ppm)
Ni (231.604 nm)	0.4374	ppm	0.0017	0.40	1899.0000	0.4374 (ppm)
P (213.618 nm)	5.9800	ppm	0.0100	0.17	4192.0000	5.9800 (ppm)
Pb (220.353 nm)	0.4094	ppm	0.0057	1.38	764.6000	0.4094 (ppm)
Sb (206.834 nm)	0.4066	ppm	0.0051	1.25	359.4000	0.4066 (ppm)
Se (196.026 nm)	0.3810	ppm	0.0088	2.31	207.7000	0.3810 (ppm)
Si (251.611 nm)	3.1460	ppm	0.0045	0.14	6644.0000	3.1460 (ppm)
Sn (189.925 nm)	0.3980	ppm	0.0064	1.61	229.3000	0.3980 (ppm)
Sr (421.552 nm)	0.5668	ppm	0.0005	0.09	196400.0000	0.5668 (ppm)
Ti (336.122 nm)	3.2720	ppm	0.0052	0.16	328300.0000	3.2720 (ppm)
Tl (190.794 nm)	0.3462	ppm	0.0011	0.31	349.6000	0.3462 (ppm)
V (292.401 nm)	0.5665	ppm	0.0031	0.54	17390.0000	0.5665 (ppm)
W (207.912 nm)	0.3974	ppm	0.0008	0.19	645.6000	0.3974 (ppm)
Zn (202.548 nm)	0.5105	ppm	0.0020	0.38	8971.0000	0.5105 (ppm)
Zr (343.823 nm)	0.4533	ppm	0.0032	0.70	35050.0000	0.4533 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9392	355500.0000	0.0010	0.11
Y_R 371.029	0.9513	48250.0000	0.0112	1.17

Sample Name: 440-258909-B-44-A@5

Date: 1/15/2020 2:57:28 PM

Rack:Tube: 1:27

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0032 u	ppm	0.0002	5.18	-533.8000	-0.0032 u (ppm)
Al (396.152 nm)	44.3200	ppm	0.0107	0.02	1343000.0000	44.3200 (ppm)
As (188.980 nm)	0.1926	ppm	0.0029	1.49	100.2000	0.1926 (ppm)
B (249.678 nm)	0.0263	ppm	0.0003	1.03	-53.7600	0.0263 (ppm)
Ba (233.527 nm)	0.2608	ppm	0.0020	0.77	22370.0000	0.2608 (ppm)
Be (234.861 nm)	0.0001 u	ppm	0.0002	> 100.00	4209.0000	0.0001 u (ppm)
Ca (422.673 nm)	39.8400	ppm	0.0754	0.19	155400.0000	39.8400 (ppm)
Cd (214.439 nm)	0.0002	ppm	0.0000	22.62	43.8800	0.0002 (ppm)
Co (228.615 nm)	0.0229	ppm	0.0020	8.78	373.2000	0.0229 (ppm)
Cr (205.560 nm)	0.1171	ppm	0.0010	0.87	527.2000	0.1171 (ppm)
Cu (324.754 nm)	5.8740	ppm	0.0065	0.11	229900.0000	5.8740 (ppm)
Fe (238.204 nm)	273.1000	ppm	0.2741	0.10	689300.0000	273.1000 (ppm)
K (766.491 nm)	11.2300	ppm	0.0170	0.15	11390.0000	11.2300 (ppm)
Li (670.783 nm)	0.0535	ppm	0.0004	0.79	1511.0000	0.0535 (ppm)
Mg (279.078 nm)	32.1300	ppm	0.2480	0.77	86600.0000	32.1300 (ppm)
Mn (259.372 nm)	0.4623	ppm	0.0004	0.08	72980.0000	0.4623 (ppm)
Mo (204.598 nm)	0.1371	ppm	0.0013	0.97	535.3000	0.1371 (ppm)
Na (589.592 nm)	4.8690	ppm	0.0195	0.40	28760.0000	4.8690 (ppm)
Ni (231.604 nm)	0.0396	ppm	0.0013	3.31	147.3000	0.0396 (ppm)
P (213.618 nm)	40.9400 o	ppm	0.1374	0.34	30390.0000	40.9400 o (ppm)
Pb (220.353 nm)	0.1168	ppm	0.0004	0.34	126.1000	0.1168 (ppm)
Sb (206.834 nm)	-0.0041 u	ppm	0.0194	> 100.00	-0.9633	-0.0041 u (ppm)
Se (196.026 nm)	0.0612	ppm	0.0002	0.31	-22.9100	0.0612 (ppm)
Si (251.611 nm)	0.9768	ppm	0.0114	1.16	2050.0000	0.9768 (ppm)
Sn (189.925 nm)	0.6673	ppm	0.0070	1.04	384.3000	0.6673 (ppm)
Sr (421.552 nm)	0.7326	ppm	0.0021	0.28	253800.0000	0.7326 (ppm)
Ti (336.122 nm)	2.4610	ppm	0.0004	0.02	246900.0000	2.4610 (ppm)
Tl (190.794 nm)	-0.0332 u	ppm	0.0012	3.47	-41.7600	-0.0332 u (ppm)
V (292.401 nm)	0.2251	ppm	0.0002	0.10	7003.0000	0.2251 (ppm)
W (207.912 nm)	0.0305	ppm	0.0021	6.99	41.5100	0.0305 (ppm)
Zn (202.548 nm)	0.0754	ppm	0.0000	0.02	1748.0000	0.0754 (ppm)
Zr (343.823 nm)	0.1340	ppm	0.0004	0.30	6172.0000	0.1340 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9337	353400.0000	0.0016	0.17
Y_R 371.029	0.9485	48110.0000	0.0098	1.04

Sample Name: 440-258909-B-45-A@5

Date: 1/15/2020 2:59:40 PM

Rack:Tube: 1:28

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0006 u	ppm	0.0002	24.92	-242.2000	-0.0006 u (ppm)
Al (396.152 nm)	66.4400	ppm	0.1200	0.18	2013000.0000	66.4400 (ppm)
As (188.980 nm)	0.0725	ppm	0.0014	1.90	34.0000	0.0725 (ppm)
B (249.678 nm)	0.0225	ppm	0.0001	0.53	46.3500	0.0225 (ppm)
Ba (233.527 nm)	0.6514	ppm	0.0009	0.14	55730.0000	0.6514 (ppm)
Be (234.861 nm)	0.0011	ppm	0.0000	2.47	2536.0000	0.0011 (ppm)
Ca (422.673 nm)	43.3700	ppm	0.0979	0.23	169100.0000	43.3700 (ppm)
Cd (214.439 nm)	0.0001 u	ppm	0.0001	> 100.00	19.8500	0.0001 u (ppm)
Co (228.615 nm)	0.0172	ppm	0.0006	3.19	289.0000	0.0172 (ppm)
Cr (205.560 nm)	0.0882	ppm	0.0004	0.42	396.9000	0.0882 (ppm)
Cu (324.754 nm)	5.8420	ppm	0.0479	0.82	228600.0000	5.8420 (ppm)
Fe (238.204 nm)	154.1000	ppm	0.3566	0.23	389000.0000	154.1000 (ppm)
K (766.491 nm)	10.2800	ppm	0.1020	0.99	10400.0000	10.2800 (ppm)
Li (670.783 nm)	0.0446	ppm	0.0012	2.64	1826.0000	0.0446 (ppm)
Mg (279.078 nm)	40.0600	ppm	0.0546	0.14	108100.0000	40.0600 (ppm)
Mn (259.372 nm)	0.3841	ppm	0.0011	0.29	52640.0000	0.3841 (ppm)
Mo (204.598 nm)	0.0411	ppm	0.0008	1.83	165.7000	0.0411 (ppm)
Na (589.592 nm)	3.4250	ppm	0.0255	0.74	20210.0000	3.4250 (ppm)
Ni (231.604 nm)	0.0361	ppm	0.0008	2.14	137.6000	0.0361 (ppm)
P (213.618 nm)	9.6030	ppm	0.1972	2.05	7009.0000	9.6030 (ppm)
Pb (220.353 nm)	0.0500	ppm	0.0004	0.87	40.3100	0.0500 (ppm)
Sb (206.834 nm)	0.0175	ppm	0.0010	5.78	19.4300	0.0175 (ppm)
Se (196.026 nm)	0.0310	ppm	0.0008	2.72	-14.8900	0.0310 (ppm)
Si (251.611 nm)	0.9692	ppm	0.0030	0.31	2040.0000	0.9692 (ppm)
Sn (189.925 nm)	0.0699	ppm	0.0025	3.63	39.9800	0.0699 (ppm)
Sr (421.552 nm)	1.2490	ppm	0.0048	0.38	432200.0000	1.2490 (ppm)
Ti (336.122 nm)	2.4740	ppm	0.0042	0.17	248200.0000	2.4740 (ppm)
Tl (190.794 nm)	-0.0270 u	ppm	0.0003	1.09	-44.8900	-0.0270 u (ppm)
V (292.401 nm)	0.1874	ppm	0.0004	0.21	5898.0000	0.1874 (ppm)
W (207.912 nm)	0.0184	ppm	0.0036	19.58	22.5400	0.0184 (ppm)
Zn (202.548 nm)	0.0707	ppm	0.0007	1.00	1731.0000	0.0707 (ppm)
Zr (343.823 nm)	0.0716	ppm	0.0004	0.58	3509.0000	0.0716 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9294	351800.0000	0.0024	0.26
Y_R 371.029	0.9503	48200.0000	0.0033	0.35

Sample Name: 440-258909-B-46-A@5

Date: 1/15/2020 3:01:52 PM

Rack:Tube: 1:29

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0013 u	ppm	0.0001	10.14	-270.6000	-0.0013 u (ppm)
Al (396.152 nm)	47.6800	ppm	0.1379	0.29	1445000.0000	47.6800 (ppm)
As (188.980 nm)	0.1381	ppm	0.0037	2.71	73.4900	0.1381 (ppm)
B (249.678 nm)	0.0162	ppm	0.0001	0.57	-23.4400	0.0162 (ppm)
Ba (233.527 nm)	0.4917	ppm	0.0011	0.22	42090.0000	0.4917 (ppm)
Be (234.861 nm)	0.0025	ppm	0.0001	2.59	2804.0000	0.0025 (ppm)
Ca (422.673 nm)	31.8800	ppm	0.0103	0.03	124400.0000	31.8800 (ppm)
Cd (214.439 nm)	-0.0001 u	ppm	0.0002	> 100.00	16.6200	-0.0001 u (ppm)
Co (228.615 nm)	0.0135	ppm	0.0007	4.99	236.0000	0.0135 (ppm)
Cr (205.560 nm)	0.1074	ppm	0.0002	0.15	482.0000	0.1074 (ppm)
Cu (324.754 nm)	4.8510	ppm	0.0097	0.20	189800.0000	4.8510 (ppm)
Fe (238.204 nm)	157.1000	ppm	0.1226	0.08	396400.0000	157.1000 (ppm)
K (766.491 nm)	8.0470	ppm	0.0094	0.12	8124.0000	8.0470 (ppm)
Li (670.783 nm)	0.0353	ppm	0.0012	3.43	1243.0000	0.0353 (ppm)
Mg (279.078 nm)	31.3500	ppm	0.0969	0.31	84550.0000	31.3500 (ppm)
Mn (259.372 nm)	0.2847	ppm	0.0013	0.47	43770.0000	0.2847 (ppm)
Mo (204.598 nm)	0.0274	ppm	0.0002	0.56	111.2000	0.0274 (ppm)
Na (589.592 nm)	1.5880	ppm	0.0099	0.63	10540.0000	1.5880 (ppm)
Ni (231.604 nm)	0.0362	ppm	0.0007	1.83	138.1000	0.0362 (ppm)
P (213.618 nm)	16.3300	ppm	0.0456	0.28	12060.0000	16.3300 (ppm)
Pb (220.353 nm)	0.0477	ppm	0.0018	3.75	35.7100	0.0477 (ppm)
Sb (206.834 nm)	0.0302	ppm	0.0033	10.95	30.8000	0.0302 (ppm)
Se (196.026 nm)	0.0303	ppm	0.0034	11.30	-15.9100	0.0303 (ppm)
Si (251.611 nm)	1.2100	ppm	0.0089	0.73	2535.0000	1.2100 (ppm)
Sn (189.925 nm)	0.0602	ppm	0.0012	1.91	34.3500	0.0602 (ppm)
Sr (421.552 nm)	0.8330	ppm	0.0005	0.06	288400.0000	0.8330 (ppm)
Ti (336.122 nm)	2.2950	ppm	0.0055	0.24	230300.0000	2.2950 (ppm)
Tl (190.794 nm)	-0.0297 u	ppm	0.0004	1.47	-45.7700	-0.0297 u (ppm)
V (292.401 nm)	0.1985	ppm	0.0008	0.40	6220.0000	0.1985 (ppm)
W (207.912 nm)	0.0050	ppm	0.0026	51.73	1.1210	0.0050 (ppm)
Zn (202.548 nm)	0.0725	ppm	0.0000	0.04	1638.0000	0.0725 (ppm)
Zr (343.823 nm)	0.0711	ppm	0.0001	0.13	3411.0000	0.0711 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9374	354800.0000	0.0001	0.01
Y_R 371.029	0.9524	48310.0000	0.0052	0.55

Sample Name: 440-258909-B-48-A@5

Date: 1/15/2020 3:04:04 PM

Rack:Tube: 1:30

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0007 u	ppm	0.0003	38.68	-167.2000	-0.0007 u (ppm)
Al (396.152 nm)	60.3300	ppm	0.0254	0.04	1828000.0000	60.3300 (ppm)
As (188.980 nm)	0.0160	ppm	0.0023	14.44	2.4660	0.0160 (ppm)
B (249.678 nm)	0.0082	ppm	0.0002	1.98	-45.1100	0.0082 (ppm)
Ba (233.527 nm)	0.3341	ppm	0.0051	1.51	28620.0000	0.3341 (ppm)
Be (234.861 nm)	0.0019	ppm	0.0000	0.32	1886.0000	0.0019 (ppm)
Ca (422.673 nm)	34.6300	ppm	0.2907	0.84	135100.0000	34.6300 (ppm)
Cd (214.439 nm)	0.0000 u	ppm	0.0000	> 100.00	9.7780	0.0000 u (ppm)
Co (228.615 nm)	0.0349	ppm	0.0003	0.90	560.1000	0.0349 (ppm)
Cr (205.560 nm)	0.0756	ppm	0.0013	1.70	340.5000	0.0756 (ppm)
Cu (324.754 nm)	6.6000	ppm	0.0020	0.03	258200.0000	6.6000 (ppm)
Fe (238.204 nm)	102.6000	ppm	1.0910	1.06	259000.0000	102.6000 (ppm)
K (766.491 nm)	12.3300	ppm	0.1200	0.97	12480.0000	12.3300 (ppm)
Li (670.783 nm)	0.0361	ppm	0.0008	2.31	1621.0000	0.0361 (ppm)
Mg (279.078 nm)	44.9100	ppm	0.5336	1.19	121200.0000	44.9100 (ppm)
Mn (259.372 nm)	0.4485	ppm	0.0006	0.14	52910.0000	0.4485 (ppm)
Mo (204.598 nm)	0.0077	ppm	0.0006	7.49	36.0400	0.0077 (ppm)
Na (589.592 nm)	0.4086	ppm	0.0057	1.39	3902.0000	0.4086 (ppm)
Ni (231.604 nm)	0.0564	ppm	0.0010	1.83	229.5000	0.0564 (ppm)
P (213.618 nm)	5.9280	ppm	0.1688	2.85	4246.0000	5.9280 (ppm)
Pb (220.353 nm)	0.0253	ppm	0.0007	2.93	10.9600	0.0253 (ppm)
Sb (206.834 nm)	0.0064	ppm	0.0039	61.77	10.4200	0.0064 (ppm)
Se (196.026 nm)	0.0138	ppm	0.0032	23.25	-13.9400	0.0138 (ppm)
Si (251.611 nm)	1.1550	ppm	0.0013	0.12	2447.0000	1.1550 (ppm)
Sn (189.925 nm)	-0.0013 u	ppm	0.0022	> 100.00	-1.1610	-0.0013 u (ppm)
Sr (421.552 nm)	0.2877	ppm	0.0024	0.84	99850.0000	0.2877 (ppm)
Ti (336.122 nm)	4.5840	ppm	0.0003	0.01	460000.0000	4.5840 (ppm)
Tl (190.794 nm)	-0.0404 u	ppm	0.0001	0.13	-90.6800	-0.0404 u (ppm)
V (292.401 nm)	0.2247	ppm	0.0003	0.12	7102.0000	0.2247 (ppm)
W (207.912 nm)	0.0007 u	ppm	0.0021	> 100.00	-5.2060	0.0007 u (ppm)
Zn (202.548 nm)	0.0957	ppm	0.0000	0.05	2238.0000	0.0957 (ppm)
Zr (343.823 nm)	0.0540	ppm	0.0009	1.76	3117.0000	0.0540 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9359	354200.0000	0.0033	0.36
Y_R 371.029	0.9585	48620.0000	0.0087	0.90

Sample Name: 440-258906-B-1-A@5

Date: 1/15/2020 3:06:16 PM

Rack:Tube: 1:31

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0049 u	ppm	0.0006	11.44	-484.7000	-0.0049 u (ppm)
Al (396.152 nm)	75.8500	ppm	0.0419	0.06	2299000.0000	75.8500 (ppm)
As (188.980 nm)	0.1953	ppm	0.0053	2.74	104.8000	0.1953 (ppm)
B (249.678 nm)	0.0199	ppm	0.0010	5.09	-29.0300	0.0199 (ppm)
Ba (233.527 nm)	0.3274	ppm	0.0008	0.23	28060.0000	0.3274 (ppm)
Be (234.861 nm)	0.0041	ppm	0.0001	1.65	3630.0000	0.0041 (ppm)
Ca (422.673 nm)	35.2800	ppm	0.0285	0.08	137600.0000	35.2800 (ppm)
Cd (214.439 nm)	0.0000 u	ppm	0.0001	> 100.00	25.5500	0.0000 u (ppm)
Co (228.615 nm)	0.0217	ppm	0.0007	3.09	402.7000	0.0217 (ppm)
Cr (205.560 nm)	0.3072	ppm	0.0013	0.42	1370.0000	0.3072 (ppm)
Cu (324.754 nm)	6.2780	ppm	0.0033	0.05	245700.0000	6.2780 (ppm)
Fe (238.204 nm)	194.1000	ppm	0.0620	0.03	489900.0000	194.1000 (ppm)
K (766.491 nm)	11.1100	ppm	0.0742	0.67	11260.0000	11.1100 (ppm)
Li (670.783 nm)	0.0564	ppm	0.0009	1.61	2240.0000	0.0564 (ppm)
Mg (279.078 nm)	48.7900	ppm	0.0823	0.17	131600.0000	48.7900 (ppm)
Mn (259.372 nm)	0.3962	ppm	0.0002	0.05	58240.0000	0.3962 (ppm)
Mo (204.598 nm)	0.1701	ppm	0.0011	0.66	664.5000	0.1701 (ppm)
Na (589.592 nm)	2.2730	ppm	0.0286	1.26	14450.0000	2.2730 (ppm)
Ni (231.604 nm)	0.0504	ppm	0.0010	2.04	199.0000	0.0504 (ppm)
P (213.618 nm)	30.5300 o	ppm	0.1120	0.37	22610.0000	30.5300 o (ppm)
Pb (220.353 nm)	0.1365	ppm	0.0068	5.00	192.8000	0.1365 (ppm)
Sb (206.834 nm)	-0.0071 u	ppm	0.0267	> 100.00	-1.6140	-0.0071 u (ppm)
Se (196.026 nm)	0.0328	ppm	0.0063	19.34	-22.7900	0.0328 (ppm)
Si (251.611 nm)	1.0820	ppm	0.0033	0.30	2299.0000	1.0820 (ppm)
Sn (189.925 nm)	1.4900	ppm	0.0048	0.32	858.4000	1.4900 (ppm)
Sr (421.552 nm)	0.8102	ppm	0.0016	0.19	280600.0000	0.8102 (ppm)
Ti (336.122 nm)	4.7400	ppm	0.0030	0.06	475700.0000	4.7400 (ppm)
Tl (190.794 nm)	-0.0532 u	ppm	0.0008	1.50	-98.8200	-0.0532 u (ppm)
V (292.401 nm)	0.2304	ppm	0.0001	0.04	7231.0000	0.2304 (ppm)
W (207.912 nm)	0.0313	ppm	0.0007	2.26	43.4200	0.0313 (ppm)
Zn (202.548 nm)	0.0793	ppm	0.0002	0.19	1902.0000	0.0793 (ppm)
Zr (343.823 nm)	0.1039	ppm	0.0003	0.32	5315.0000	0.1039 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9323	352900.0000	0.0045	0.48
Y_R 371.029	0.9561	48490.0000	0.0033	0.34

Sample Name: CCV 6043773

Date: 1/15/2020 3:11:16 PM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.5019	ppm	0.0007	0.15	20260.0000	0.5019 (ppm)
Al (396.152 nm)	1.0250	ppm	0.0087	0.85	31870.0000	1.0250 (ppm)
As (188.980 nm)	1.0120	ppm	0.0015	0.14	607.1000	1.0120 (ppm)
B (249.678 nm)	1.0080	ppm	0.0042	0.42	10660.0000	1.0080 (ppm)
Ba (233.527 nm)	1.0050	ppm	0.0012	0.12	85950.0000	1.0050 (ppm)
Be (234.861 nm)	1.0100	ppm	0.0015	0.14	158400.0000	1.0100 (ppm)
Ca (422.673 nm)	5.0140	ppm	0.0188	0.37	19630.0000	5.0140 (ppm)
Cd (214.439 nm)	1.0120	ppm	0.0004	0.04	21840.0000	1.0120 (ppm)
Co (228.615 nm)	1.0100	ppm	0.0019	0.18	13060.0000	1.0100 (ppm)
Cr (205.560 nm)	1.0080	ppm	0.0018	0.18	4473.0000	1.0080 (ppm)
Cu (324.754 nm)	1.0110	ppm	0.0083	0.83	39680.0000	1.0110 (ppm)
Fe (238.204 nm)	1.0550	ppm	0.0016	0.16	2607.0000	1.0550 (ppm)
K (766.491 nm)	10.0000	ppm	0.0610	0.61	10070.0000	10.0000 (ppm)
Li (670.783 nm)	1.0010	ppm	0.0005	0.05	57020.0000	1.0010 (ppm)
Mg (279.078 nm)	5.0660	ppm	0.0055	0.11	13690.0000	5.0660 (ppm)
Mn (259.372 nm)	1.0080	ppm	0.0000	0.00	93690.0000	1.0080 (ppm)
Mo (204.598 nm)	1.0130	ppm	0.0013	0.13	3901.0000	1.0130 (ppm)
Na (589.592 nm)	9.9590	ppm	0.0037	0.04	53480.0000	9.9590 (ppm)
Ni (231.604 nm)	1.0130	ppm	0.0011	0.11	4431.0000	1.0130 (ppm)
P (213.618 nm)	1.0160	ppm	0.0036	0.35	717.9000	1.0160 (ppm)
Pb (220.353 nm)	1.0090	ppm	0.0015	0.15	2001.0000	1.0090 (ppm)
Sb (206.834 nm)	1.0070	ppm	0.0040	0.40	883.2000	1.0070 (ppm)
Se (196.026 nm)	1.0030	ppm	0.0057	0.57	617.2000	1.0030 (ppm)
Si (251.611 nm)	5.0440	ppm	0.0484	0.96	10670.0000	5.0440 (ppm)
Sn (189.925 nm)	1.0100	ppm	0.0061	0.60	582.5000	1.0100 (ppm)
Sr (421.552 nm)	1.0020	ppm	0.0023	0.23	346400.0000	1.0020 (ppm)
Ti (336.122 nm)	1.0270	ppm	0.0038	0.37	103000.0000	1.0270 (ppm)
Tl (190.794 nm)	1.0050	ppm	0.0053	0.52	1088.0000	1.0050 (ppm)
V (292.401 nm)	1.0100	ppm	0.0023	0.22	30710.0000	1.0100 (ppm)
W (207.912 nm)	1.0170	ppm	0.0034	0.33	1661.0000	1.0170 (ppm)
Zn (202.548 nm)	1.0150	ppm	0.0018	0.18	15740.0000	1.0150 (ppm)
Zr (343.823 nm)	1.0160	ppm	0.0012	0.12	83010.0000	1.0160 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9653	365300.0000	0.0018	0.19
Y_R 371.029	0.9810	49760.0000	0.0024	0.24

Sample Name: CCB 6043772

Date: 1/15/2020 3:16:54 PM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0001 u	ppm	0.0003	> 100.00	40.7200	-0.0001 u (ppm)
Al (396.152 nm)	0.0009	ppm	0.0000	2.93	-298.8000	0.0009 (ppm)
As (188.980 nm)	-0.0015 u	ppm	0.0004	28.95	-2.2030	-0.0015 u (ppm)
B (249.678 nm)	0.0005 u	ppm	0.0014	> 100.00	-8.0290	0.0005 u (ppm)
Ba (233.527 nm)	0.0001	ppm	0.0000	11.01	72.2300	0.0001 (ppm)
Be (234.861 nm)	0.0001	ppm	0.0000	3.84	37.7700	0.0001 (ppm)
Ca (422.673 nm)	-0.0054 u	ppm	0.0058	> 100.00	59.2900	-0.0054 u (ppm)
Cd (214.439 nm)	0.0001	ppm	0.0000	19.68	-4.6300	0.0001 (ppm)
Co (228.615 nm)	-0.0002 u	ppm	0.0004	> 100.00	-11.9800	-0.0002 u (ppm)
Cr (205.560 nm)	-0.0009 u	ppm	0.0001	9.26	-3.6200	-0.0009 u (ppm)
Cu (324.754 nm)	0.0009	ppm	0.0000	5.36	169.2000	0.0009 (ppm)
Fe (238.204 nm)	0.0006 u	ppm	0.0012	> 100.00	-54.1700	0.0006 u (ppm)
K (766.491 nm)	-0.0035 u	ppm	0.0860	> 100.00	-129.3000	-0.0035 u (ppm)
Li (670.783 nm)	-0.0005 u	ppm	0.0013	> 100.00	95.5700	-0.0005 u (ppm)
Mg (279.078 nm)	0.0042	ppm	0.0011	24.78	25.7700	0.0042 (ppm)
Mn (259.372 nm)	0.0001	ppm	0.0000	37.91	56.1600	0.0001 (ppm)
Mo (204.598 nm)	0.0009	ppm	0.0006	73.46	1.6410	0.0009 (ppm)
Na (589.592 nm)	-0.0724 u	ppm	0.0176	24.26	519.4000	-0.0724 u (ppm)
Ni (231.604 nm)	0.0001 u	ppm	0.0010	> 100.00	-11.4300	0.0001 u (ppm)
P (213.618 nm)	0.0018	ppm	0.0014	75.34	5.4070	0.0018 (ppm)
Pb (220.353 nm)	0.0002 u	ppm	0.0025	> 100.00	8.9890	0.0002 u (ppm)
Sb (206.834 nm)	0.0030	ppm	0.0041	> 100.00	5.1590	0.0030 (ppm)
Se (196.026 nm)	0.0026 u	ppm	0.0050	> 100.00	3.1020	0.0026 u (ppm)
Si (251.611 nm)	-0.0001 u	ppm	0.0000	6.78	-0.6788	-0.0001 u (ppm)
Sn (189.925 nm)	-0.0015 u	ppm	0.0005	30.70	-1.2300	-0.0015 u (ppm)
Sr (421.552 nm)	0.0000	ppm	0.0000	37.04	-26.8600	0.0000 (ppm)
Ti (336.122 nm)	0.0009	ppm	0.0005	54.32	-66.8900	0.0009 (ppm)
Tl (190.794 nm)	0.0009 u	ppm	0.0020	> 100.00	6.5440	0.0009 u (ppm)
V (292.401 nm)	-0.0001 u	ppm	0.0002	> 100.00	73.4800	-0.0001 u (ppm)
W (207.912 nm)	0.0042	ppm	0.0004	10.12	1.0630	0.0042 (ppm)
Zn (202.548 nm)	0.0003	ppm	0.0002	50.35	14.0800	0.0003 (ppm)
Zr (343.823 nm)	0.0004	ppm	0.0002	48.55	847.3000	0.0004 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9697	367000.0000	0.0037	0.38
Y_R 371.029	0.9780	49600.0000	0.0038	0.39

Sample Name: 440-258906-B-2-A@5

Date: 1/15/2020 3:19:06 PM

Rack:Tube: 1:32

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0014 u	ppm	0.0005	38.11	-242.3000	-0.0014 u (ppm)
Al (396.152 nm)	51.9200	ppm	0.0049	0.01	1573000.0000	51.9200 (ppm)
As (188.980 nm)	0.0543	ppm	0.0014	2.56	24.0600	0.0543 (ppm)
B (249.678 nm)	0.0090	ppm	0.0005	5.19	-70.7100	0.0090 (ppm)
Ba (233.527 nm)	0.3076	ppm	0.0003	0.08	26360.0000	0.3076 (ppm)
Be (234.861 nm)	0.0013	ppm	0.0001	9.68	2236.0000	0.0013 (ppm)
Ca (422.673 nm)	32.3000	ppm	0.0911	0.28	126000.0000	32.3000 (ppm)
Cd (214.439 nm)	0.0000 u	ppm	0.0003	> 100.00	15.4200	0.0000 u (ppm)
Co (228.615 nm)	0.0207	ppm	0.0011	5.44	365.7000	0.0207 (ppm)
Cr (205.560 nm)	0.0776	ppm	0.0014	1.81	349.0000	0.0776 (ppm)
Cu (324.754 nm)	2.9870	ppm	0.0021	0.07	117000.0000	2.9870 (ppm)
Fe (238.204 nm)	132.0000	ppm	0.3720	0.28	333200.0000	132.0000 (ppm)
K (766.491 nm)	11.9500	ppm	0.0087	0.07	12100.0000	11.9500 (ppm)
Li (670.783 nm)	0.0274	ppm	0.0001	0.50	1138.0000	0.0274 (ppm)
Mg (279.078 nm)	45.0600	ppm	0.0623	0.14	121600.0000	45.0600 (ppm)
Mn (259.372 nm)	0.3311	ppm	0.0003	0.08	45310.0000	0.3311 (ppm)
Mo (204.598 nm)	0.0449	ppm	0.0019	4.24	178.9000	0.0449 (ppm)
Na (589.592 nm)	0.9337	ppm	0.0095	1.02	6891.0000	0.9337 (ppm)
Ni (231.604 nm)	0.0480	ppm	0.0005	1.06	191.5000	0.0480 (ppm)
P (213.618 nm)	9.0220	ppm	0.0682	0.76	6654.0000	9.0220 (ppm)
Pb (220.353 nm)	0.0514	ppm	0.0033	6.41	51.6700	0.0514 (ppm)
Sb (206.834 nm)	0.0021 u	ppm	0.0068	> 100.00	5.6970	0.0021 u (ppm)
Se (196.026 nm)	0.0239	ppm	0.0021	8.96	-14.0500	0.0239 (ppm)
Si (251.611 nm)	1.0540	ppm	0.0006	0.05	2230.0000	1.0540 (ppm)
Sn (189.925 nm)	0.1859	ppm	0.0075	4.01	106.7000	0.1859 (ppm)
Sr (421.552 nm)	0.3872	ppm	0.0002	0.06	134200.0000	0.3872 (ppm)
Ti (336.122 nm)	4.0160	ppm	0.0019	0.05	403000.0000	4.0160 (ppm)
Tl (190.794 nm)	-0.0389 u	ppm	0.0026	6.72	-78.9000	-0.0389 u (ppm)
V (292.401 nm)	0.1916	ppm	0.0001	0.07	6058.0000	0.1916 (ppm)
W (207.912 nm)	0.0092	ppm	0.0005	5.63	8.0940	0.0092 (ppm)
Zn (202.548 nm)	0.0838	ppm	0.0004	0.43	1608.0000	0.0838 (ppm)
Zr (343.823 nm)	0.0646	ppm	0.0005	0.79	3385.0000	0.0646 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9337	353400.0000	0.0016	0.18
Y_R 371.029	0.9522	48300.0000	0.0016	0.17

Sample Name: 440-258906-B-3-A@5

Date: 1/15/2020 3:21:18 PM

Rack:Tube: 1:33

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0015 u	ppm	0.0004	25.05	-246.4000	-0.0015 u (ppm)
Al (396.152 nm)	55.2300	ppm	0.0155	0.03	1674000.0000	55.2300 (ppm)
As (188.980 nm)	0.0470	ppm	0.0076	16.16	19.4500	0.0470 (ppm)
B (249.678 nm)	0.0091	ppm	0.0006	6.56	-71.7800	0.0091 (ppm)
Ba (233.527 nm)	0.3306	ppm	0.0013	0.40	28330.0000	0.3306 (ppm)
Be (234.861 nm)	0.0012	ppm	0.0001	4.54	2240.0000	0.0012 (ppm)
Ca (422.673 nm)	36.9000	ppm	0.0731	0.20	143900.0000	36.9000 (ppm)
Cd (214.439 nm)	0.0000 u	ppm	0.0001	> 100.00	15.6200	0.0000 u (ppm)
Co (228.615 nm)	0.0217	ppm	0.0010	4.48	386.8000	0.0217 (ppm)
Cr (205.560 nm)	0.0828	ppm	0.0003	0.32	372.1000	0.0828 (ppm)
Cu (324.754 nm)	2.9200	ppm	0.0074	0.25	114400.0000	2.9200 (ppm)
Fe (238.204 nm)	133.6000	ppm	0.2329	0.17	337100.0000	133.6000 (ppm)
K (766.491 nm)	12.2600	ppm	0.1137	0.93	12430.0000	12.2600 (ppm)
Li (670.783 nm)	0.0284	ppm	0.0001	0.49	1214.0000	0.0284 (ppm)
Mg (279.078 nm)	47.5100	ppm	0.2137	0.45	128200.0000	47.5100 (ppm)
Mn (259.372 nm)	0.3671	ppm	0.0001	0.02	48810.0000	0.3671 (ppm)
Mo (204.598 nm)	0.0437	ppm	0.0000	0.03	174.6000	0.0437 (ppm)
Na (589.592 nm)	0.7710	ppm	0.0009	0.11	6047.0000	0.7710 (ppm)
Ni (231.604 nm)	0.0529	ppm	0.0001	0.16	212.8000	0.0529 (ppm)
P (213.618 nm)	9.9280	ppm	0.0532	0.54	7332.0000	9.9280 (ppm)
Pb (220.353 nm)	0.0449	ppm	0.0004	0.96	37.7400	0.0449 (ppm)
Sb (206.834 nm)	0.0034	ppm	0.0000	1.19	6.9540	0.0034 (ppm)
Se (196.026 nm)	0.0200	ppm	0.0014	6.88	-16.7700	0.0200 (ppm)
Si (251.611 nm)	1.0250	ppm	0.0025	0.24	2173.0000	1.0250 (ppm)
Sn (189.925 nm)	0.1864	ppm	0.0008	0.42	107.0000	0.1864 (ppm)
Sr (421.552 nm)	0.3889	ppm	0.0010	0.25	134900.0000	0.3889 (ppm)
Ti (336.122 nm)	4.3180	ppm	0.0020	0.05	433300.0000	4.3180 (ppm)
Tl (190.794 nm)	-0.0388 u	ppm	0.0024	6.20	-82.5300	-0.0388 u (ppm)
V (292.401 nm)	0.1982	ppm	0.0009	0.46	6272.0000	0.1982 (ppm)
W (207.912 nm)	0.0077	ppm	0.0017	22.12	5.7110	0.0077 (ppm)
Zn (202.548 nm)	0.0919	ppm	0.0001	0.06	1723.0000	0.0919 (ppm)
Zr (343.823 nm)	0.0712	ppm	0.0006	0.89	3890.0000	0.0712 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9329	353100.0000	0.0038	0.40
Y_R 371.029	0.9543	48400.0000	0.0001	0.01

Sample Name: 440-258906-B-4-A@5

Date: 1/15/2020 3:23:31 PM

Rack:Tube: 1:34

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0004 u	ppm	0.0000	8.50	-148.4000	-0.0004 u (ppm)
Al (396.152 nm)	35.3100	ppm	0.0991	0.28	1070000.0000	35.3100 (ppm)
As (188.980 nm)	0.0317	ppm	0.0050	15.64	11.7700	0.0317 (ppm)
B (249.678 nm)	0.0071	ppm	0.0005	6.86	-58.2200	0.0071 (ppm)
Ba (233.527 nm)	0.2227	ppm	0.0003	0.14	19100.0000	0.2227 (ppm)
Be (234.861 nm)	0.0006	ppm	0.0003	50.54	1704.0000	0.0006 (ppm)
Ca (422.673 nm)	29.5500	ppm	0.2101	0.71	115300.0000	29.5500 (ppm)
Cd (214.439 nm)	-0.0004 u	ppm	0.0003	87.02	3.1640	-0.0004 u (ppm)
Co (228.615 nm)	0.0155	ppm	0.0005	2.93	251.0000	0.0155 (ppm)
Cr (205.560 nm)	0.0837	ppm	0.0009	1.11	375.1000	0.0837 (ppm)
Cu (324.754 nm)	2.7730	ppm	0.0144	0.52	108600.0000	2.7730 (ppm)
Fe (238.204 nm)	104.1000	ppm	0.8299	0.80	262800.0000	104.1000 (ppm)
K (766.491 nm)	9.1500	ppm	0.1558	1.70	9236.0000	9.1500 (ppm)
Li (670.783 nm)	0.0208	ppm	0.0002	1.00	816.3000	0.0208 (ppm)
Mg (279.078 nm)	33.5100	ppm	0.0630	0.19	90430.0000	33.5100 (ppm)
Mn (259.372 nm)	0.3042	ppm	0.0016	0.54	39710.0000	0.3042 (ppm)
Mo (204.598 nm)	0.0208	ppm	0.0009	4.54	83.5500	0.0208 (ppm)
Na (589.592 nm)	0.0446	ppm	0.0083	18.63	1977.0000	0.0446 (ppm)
Ni (231.604 nm)	0.0407	ppm	0.0003	0.69	160.8000	0.0407 (ppm)
P (213.618 nm)	10.5100	ppm	0.1080	1.03	7771.0000	10.5100 (ppm)
Pb (220.353 nm)	0.0269	ppm	0.0035	13.11	17.0200	0.0269 (ppm)
Sb (206.834 nm)	0.0022	ppm	0.0017	77.06	5.7140	0.0022 (ppm)
Se (196.026 nm)	0.0126	ppm	0.0080	63.09	-14.5400	0.0126 (ppm)
Si (251.611 nm)	0.9445	ppm	0.0119	1.26	1984.0000	0.9445 (ppm)
Sn (189.925 nm)	0.0170	ppm	0.0096	56.53	9.4710	0.0170 (ppm)
Sr (421.552 nm)	0.1521	ppm	0.0017	1.15	52910.0000	0.1521 (ppm)
Ti (336.122 nm)	2.0590	ppm	0.0033	0.16	206500.0000	2.0590 (ppm)
Tl (190.794 nm)	-0.0229 u	ppm	0.0019	8.11	-38.2800	-0.0229 u (ppm)
V (292.401 nm)	0.1253	ppm	0.0005	0.42	3983.0000	0.1253 (ppm)
W (207.912 nm)	0.0009 u	ppm	0.0037	> 100.00	-4.8840	0.0009 u (ppm)
Zn (202.548 nm)	0.0877	ppm	0.0003	0.33	1649.0000	0.0877 (ppm)
Zr (343.823 nm)	0.0482	ppm	0.0001	0.16	2621.0000	0.0482 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9402	355800.0000	0.0002	0.02
Y_R 371.029	0.9641	48900.0000	0.0046	0.47

Sample Name: 440-258906-B-5-A@5

Date: 1/15/2020 3:25:42 PM

Rack:Tube: 1:35

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0003 u	ppm	0.0005	> 100.00	-183.4000	-0.0003 u (ppm)
Al (396.152 nm)	48.3900	ppm	0.0070	0.01	1466000.0000	48.3900 (ppm)
As (188.980 nm)	0.0232	ppm	0.0030	12.97	5.7540	0.0232 (ppm)
B (249.678 nm)	0.0095	ppm	0.0004	4.48	-59.8300	0.0095 (ppm)
Ba (233.527 nm)	0.2439	ppm	0.0010	0.39	20920.0000	0.2439 (ppm)
Be (234.861 nm)	0.0014	ppm	0.0003	17.44	2169.0000	0.0014 (ppm)
Ca (422.673 nm)	32.8600	ppm	0.0615	0.19	128200.0000	32.8600 (ppm)
Cd (214.439 nm)	0.0000 u	ppm	0.0001	> 100.00	13.8600	0.0000 u (ppm)
Co (228.615 nm)	0.0208	ppm	0.0002	1.07	333.0000	0.0208 (ppm)
Cr (205.560 nm)	0.0634	ppm	0.0001	0.10	287.0000	0.0634 (ppm)
Cu (324.754 nm)	10.0200	ppm	0.0043	0.04	392100.0000	10.0200 (ppm)
Fe (238.204 nm)	126.4000	ppm	0.0824	0.07	318900.0000	126.4000 (ppm)
K (766.491 nm)	10.0400	ppm	0.0438	0.44	10150.0000	10.0400 (ppm)
Li (670.783 nm)	0.0360	ppm	0.0007	2.03	1169.0000	0.0360 (ppm)
Mg (279.078 nm)	40.5500	ppm	0.1136	0.28	109400.0000	40.5500 (ppm)
Mn (259.372 nm)	0.3577	ppm	0.0005	0.13	47110.0000	0.3577 (ppm)
Mo (204.598 nm)	0.0126	ppm	0.0006	4.85	53.7200	0.0126 (ppm)
Na (589.592 nm)	0.1684	ppm	0.0061	3.60	2825.0000	0.1684 (ppm)
Ni (231.604 nm)	0.0479	ppm	0.0019	3.95	190.4000	0.0479 (ppm)
P (213.618 nm)	8.4620	ppm	0.2506	2.96	6040.0000	8.4620 (ppm)
Pb (220.353 nm)	0.0363	ppm	0.0033	9.13	26.1100	0.0363 (ppm)
Sb (206.834 nm)	0.0032	ppm	0.0044	> 100.00	7.1460	0.0032 (ppm)
Se (196.026 nm)	0.0139	ppm	0.0061	43.92	-19.3200	0.0139 (ppm)
Si (251.611 nm)	0.9426	ppm	0.0009	0.10	1985.0000	0.9426 (ppm)
Sn (189.925 nm)	0.0408	ppm	0.0026	6.45	23.2200	0.0408 (ppm)
Sr (421.552 nm)	0.1786	ppm	0.0005	0.26	62110.0000	0.1786 (ppm)
Ti (336.122 nm)	2.4690	ppm	0.0025	0.10	247700.0000	2.4690 (ppm)
Tl (190.794 nm)	-0.0229 u	ppm	0.0027	11.90	-43.4800	-0.0229 u (ppm)
V (292.401 nm)	0.2067	ppm	0.0001	0.03	6486.0000	0.2067 (ppm)
W (207.912 nm)	0.0026 u	ppm	0.0041	> 100.00	-1.8700	0.0026 u (ppm)
Zn (202.548 nm)	0.1066	ppm	0.0028	2.58	2802.0000	0.1066 (ppm)
Zr (343.823 nm)	0.0538	ppm	0.0006	1.17	2633.0000	0.0538 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9387	355300.0000	0.0026	0.27
Y_R 371.029	0.9589	48640.0000	0.0045	0.47

Sample Name: xRINSE 6043786

Date: 1/15/2020 3:27:54 PM

Rack:Tube: S1:8

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0003 u	ppm	0.0001	47.08	33.4000	-0.0003 u (ppm)
Al (396.152 nm)	0.0312	ppm	0.0088	28.27	619.2000	0.0312 (ppm)
As (188.980 nm)	0.0055	ppm	0.0015	26.45	2.0030	0.0055 (ppm)
B (249.678 nm)	0.0001 u	ppm	0.0004	> 100.00	-11.2100	0.0001 u (ppm)
Ba (233.527 nm)	0.0002	ppm	0.0001	29.37	81.1500	0.0002 (ppm)
Be (234.861 nm)	0.0000	ppm	0.0000	54.78	18.9800	0.0000 (ppm)
Ca (422.673 nm)	0.0218	ppm	0.0098	44.84	165.3000	0.0218 (ppm)
Cd (214.439 nm)	0.0000 u	ppm	0.0000	16.53	-7.3330	0.0000 u (ppm)
Co (228.615 nm)	0.0002	ppm	0.0001	33.98	-5.4340	0.0002 (ppm)
Cr (205.560 nm)	-0.0001 u	ppm	0.0002	> 100.00	0.1153	-0.0001 u (ppm)
Cu (324.754 nm)	0.0056	ppm	0.0016	29.29	352.3000	0.0056 (ppm)
Fe (238.204 nm)	0.0661	ppm	0.0041	6.15	111.2000	0.0661 (ppm)
K (766.491 nm)	0.0250 u	ppm	0.0373	> 100.00	-100.2000	0.0250 u (ppm)
Li (670.783 nm)	-0.0017 u	ppm	0.0003	20.83	30.6500	-0.0017 u (ppm)
Mg (279.078 nm)	0.0278 Z	ppm	0.0129	46.18	89.3900 Z	0.0278 Z (ppm)
Mn (259.372 nm)	0.0004	ppm	0.0001	16.54	83.8900	0.0004 (ppm)
Mo (204.598 nm)	-0.0006 u	ppm	0.0002	29.15	-4.2110	-0.0006 u (ppm)
Na (589.592 nm)	-0.0712 u	ppm	0.0084	11.82	525.9000	-0.0712 u (ppm)
Ni (231.604 nm)	0.0008	ppm	0.0005	62.98	-8.3820	0.0008 (ppm)
P (213.618 nm)	0.0065	ppm	0.0008	11.75	8.8020	0.0065 (ppm)
Pb (220.353 nm)	-0.0013 u	ppm	0.0017	> 100.00	6.0860	-0.0013 u (ppm)
Sb (206.834 nm)	-0.0017 u	ppm	0.0024	> 100.00	1.0570	-0.0017 u (ppm)
Se (196.026 nm)	0.0021	ppm	0.0007	33.53	2.7440	0.0021 (ppm)
Si (251.611 nm)	-0.0005 u	ppm	0.0003	48.47	-1.8760	-0.0005 u (ppm)
Sn (189.925 nm)	-0.0025 u	ppm	0.0029	> 100.00	-1.7610	-0.0025 u (ppm)
Sr (421.552 nm)	0.0000 u	ppm	0.0001	> 100.00	-33.0900	0.0000 u (ppm)
Ti (336.122 nm)	0.0052 Z	ppm	0.0000	0.17	366.8000 Z	0.0052 Z (ppm)
Tl (190.794 nm)	-0.0005 u	ppm	0.0013	> 100.00	4.9190	-0.0005 u (ppm)
V (292.401 nm)	0.0001	ppm	0.0000	27.95	79.4500	0.0001 (ppm)
W (207.912 nm)	0.0008	ppm	0.0005	63.03	-4.5570	0.0008 (ppm)
Zn (202.548 nm)	0.0007	ppm	0.0002	31.46	19.7600	0.0007 (ppm)
Zr (343.823 nm)	0.0002	ppm	0.0002	97.61	829.3000	0.0002 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9760	369400.0000	0.0004	0.04
Y_R 371.029	0.9871	50070.0000	0.0045	0.45

Sample Name: MB 440-590297/1-A@5

Date: 1/15/2020 3:30:54 PM

Rack:Tube: 1:36

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.0000 u	ppm	0.0002	> 100.00	45.3000	0.0000 u (ppm)
Al (396.152 nm)	0.0054	ppm	0.0005	8.89	-163.1000	0.0054 (ppm)
As (188.980 nm)	0.0045	ppm	0.0013	28.03	1.4040	0.0045 (ppm)
B (249.678 nm)	0.0007	ppm	0.0001	9.66	-5.0870	0.0007 (ppm)
Ba (233.527 nm)	0.0002	ppm	0.0000	19.33	79.4700	0.0002 (ppm)
Be (234.861 nm)	0.0000 u	ppm	0.0000	1.47	12.8500	0.0000 u (ppm)
Ca (422.673 nm)	0.0200	ppm	0.0039	19.32	158.1000	0.0200 (ppm)
Cd (214.439 nm)	0.0000 u	ppm	0.0000	> 100.00	-6.6960	0.0000 u (ppm)
Co (228.615 nm)	0.0000 u	ppm	0.0004	> 100.00	-8.1120	0.0000 u (ppm)
Cr (205.560 nm)	-0.0003 u	ppm	0.0002	69.63	-0.8433	-0.0003 u (ppm)
Cu (324.754 nm)	0.0038	ppm	0.0004	10.89	281.5000	0.0038 (ppm)
Fe (238.204 nm)	0.0284	ppm	0.0028	10.03	16.0500	0.0284 (ppm)
K (766.491 nm)	-0.0800 u	ppm	0.0321	40.15	-207.2000	-0.0800 u (ppm)
Li (670.783 nm)	-0.0013 u	ppm	0.0009	72.48	53.2500	-0.0013 u (ppm)
Mg (279.078 nm)	0.0045	ppm	0.0025	56.01	26.3300	0.0045 (ppm)
Mn (259.372 nm)	0.0003	ppm	0.0000	3.66	77.7500	0.0003 (ppm)
Mo (204.598 nm)	-0.0003 u	ppm	0.0002	83.47	-2.7460	-0.0003 u (ppm)
Na (589.592 nm)	-0.0430 u	ppm	0.0064	14.84	674.5000	-0.0430 u (ppm)
Ni (231.604 nm)	0.0006	ppm	0.0007	> 100.00	-9.4150	0.0006 (ppm)
P (213.618 nm)	0.0044	ppm	0.0011	24.21	7.2440	0.0044 (ppm)
Pb (220.353 nm)	0.0021 u	ppm	0.0049	> 100.00	12.8500	0.0021 u (ppm)
Sb (206.834 nm)	-0.0019 u	ppm	0.0037	> 100.00	0.8810	-0.0019 u (ppm)
Se (196.026 nm)	-0.0008 u	ppm	0.0063	> 100.00	1.0460	-0.0008 u (ppm)
Si (251.611 nm)	0.0052	ppm	0.0015	28.64	10.3000	0.0052 (ppm)
Sn (189.925 nm)	0.0007 u	ppm	0.0021	> 100.00	0.0411	0.0007 u (ppm)
Sr (421.552 nm)	0.0000 u	ppm	0.0001	> 100.00	-42.8400	0.0000 u (ppm)
Ti (336.122 nm)	0.0016	ppm	0.0004	26.86	1.4110	0.0016 (ppm)
Tl (190.794 nm)	-0.0006 u	ppm	0.0050	> 100.00	4.8750	-0.0006 u (ppm)
V (292.401 nm)	0.0003	ppm	0.0000	7.72	85.3600	0.0003 (ppm)
W (207.912 nm)	0.0035	ppm	0.0020	57.58	-0.1599	0.0035 (ppm)
Zn (202.548 nm)	0.0009	ppm	0.0004	45.75	22.9200	0.0009 (ppm)
Zr (343.823 nm)	0.0014	ppm	0.0001	4.50	926.2000	0.0014 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9713	367600.0000	0.0008	0.08
Y_R 371.029	0.9841	49910.0000	0.0114	1.16

Sample Name: LCS 440-590297/2-A@5

Date: 1/15/2020 3:33:07 PM

Rack:Tube: 1:37

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.1840	ppm	0.0000	0.02	7449.0000	0.1840 (ppm)
Al (396.152 nm)	0.3684	ppm	0.0007	0.20	11250.0000	0.3684 (ppm)
As (188.980 nm)	0.3698	ppm	0.0001	0.01	220.9000	0.3698 (ppm)
B (249.678 nm)	0.3586	ppm	0.0025	0.70	3782.0000	0.3586 (ppm)
Ba (233.527 nm)	0.3735	ppm	0.0000	0.01	31970.0000	0.3735 (ppm)
Be (234.861 nm)	0.3643	ppm	0.0012	0.33	57170.0000	0.3643 (ppm)
Ca (422.673 nm)	1.8910	ppm	0.0011	0.06	7454.0000	1.8910 (ppm)
Cd (214.439 nm)	0.3692	ppm	0.0005	0.15	7966.0000	0.3692 (ppm)
Co (228.615 nm)	0.3751	ppm	0.0039	1.03	4841.0000	0.3751 (ppm)
Cr (205.560 nm)	0.3761	ppm	0.0006	0.16	1670.0000	0.3761 (ppm)
Cu (324.754 nm)	0.3820	ppm	0.0013	0.35	15080.0000	0.3820 (ppm)
Fe (238.204 nm)	0.4154	ppm	0.0007	0.16	992.1000	0.4154 (ppm)
K (766.491 nm)	3.6610	ppm	0.0487	1.33	3609.0000	3.6610 (ppm)
Li (670.783 nm)	0.3707	ppm	0.0021	0.57	21190.0000	0.3707 (ppm)
Mg (279.078 nm)	1.8720	ppm	0.0051	0.27	5067.0000	1.8720 (ppm)
Mn (259.372 nm)	0.3766	ppm	0.0008	0.20	35050.0000	0.3766 (ppm)
Mo (204.598 nm)	0.3961	ppm	0.0028	0.71	1524.0000	0.3961 (ppm)
Na (589.592 nm)	3.6720	ppm	0.0039	0.11	20280.0000	3.6720 (ppm)
Ni (231.604 nm)	0.3796	ppm	0.0005	0.13	1653.0000	0.3796 (ppm)
P (213.618 nm)	0.3668	ppm	0.0049	1.34	260.8000	0.3668 (ppm)
Pb (220.353 nm)	0.3750	ppm	0.0018	0.47	748.9000	0.3750 (ppm)
Sb (206.834 nm)	0.3800	ppm	0.0036	0.96	334.6000	0.3800 (ppm)
Se (196.026 nm)	0.3439	ppm	0.0049	1.41	212.8000	0.3439 (ppm)
Si (251.611 nm)	0.2906	ppm	0.0027	0.93	664.9000	0.2906 (ppm)
Sn (189.925 nm)	0.3782	ppm	0.0016	0.43	217.8000	0.3782 (ppm)
Sr (421.552 nm)	0.3709	ppm	0.0006	0.16	128200.0000	0.3709 (ppm)
Ti (336.122 nm)	0.3776	ppm	0.0009	0.24	37750.0000	0.3776 (ppm)
Tl (190.794 nm)	0.3636	ppm	0.0083	2.28	396.8000	0.3636 (ppm)
V (292.401 nm)	0.3756	ppm	0.0003	0.08	11460.0000	0.3756 (ppm)
W (207.912 nm)	0.3732	ppm	0.0039	1.05	606.0000	0.3732 (ppm)
Zn (202.548 nm)	0.3673	ppm	0.0011	0.30	5703.0000	0.3673 (ppm)
Zr (343.823 nm)	0.3070	ppm	0.0017	0.56	25640.0000	0.3070 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9683	366500.0000	0.0026	0.27
Y_R 371.029	0.9817	49800.0000	0.0066	0.67

Sample Name: 440-258875-B-1-A SD@25

Date: 1/15/2020 3:35:19 PM

Rack:Tube: 1:38

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0004 u	ppm	0.0003	68.70	-5.6110	-0.0004 u (ppm)
Al (396.152 nm)	11.0400	ppm	0.0264	0.24	334200.0000	11.0400 (ppm)
As (188.980 nm)	0.0132	ppm	0.0031	23.38	5.4600	0.0132 (ppm)
B (249.678 nm)	0.0071	ppm	0.0019	26.78	37.8300	0.0071 (ppm)
Ba (233.527 nm)	0.1268	ppm	0.0015	1.15	10900.0000	0.1268 (ppm)
Be (234.861 nm)	0.0008	ppm	0.0002	19.87	458.4000	0.0008 (ppm)
Ca (422.673 nm)	10.5200	ppm	0.0675	0.64	41100.0000	10.5200 (ppm)
Cd (214.439 nm)	0.0004	ppm	0.0003	83.71	4.8560	0.0004 (ppm)
Co (228.615 nm)	0.0076	ppm	0.0003	3.32	103.1000	0.0076 (ppm)
Cr (205.560 nm)	0.0098	ppm	0.0003	2.75	44.5700	0.0098 (ppm)
Cu (324.754 nm)	0.1060	ppm	0.0005	0.48	4285.0000	0.1060 (ppm)
Fe (238.204 nm)	21.2400	ppm	0.0969	0.46	53560.0000	21.2400 (ppm)
K (766.491 nm)	1.6880	ppm	0.0797	4.72	1603.0000	1.6880 (ppm)
Li (670.783 nm)	0.0087	ppm	0.0013	15.50	551.5000	0.0087 (ppm)
Mg (279.078 nm)	5.0420	ppm	0.0576	1.14	13610.0000	5.0420 (ppm)
Mn (259.372 nm)	0.3435	ppm	0.0002	0.05	34110.0000	0.3435 (ppm)
Mo (204.598 nm)	0.0032	ppm	0.0004	11.38	12.0800	0.0032 (ppm)
Na (589.592 nm)	0.4119	ppm	0.0039	0.95	3245.0000	0.4119 (ppm)
Ni (231.604 nm)	0.0095	ppm	0.0016	16.52	28.4700	0.0095 (ppm)
P (213.618 nm)	0.6682	ppm	0.0053	0.79	500.3000	0.6682 (ppm)
Pb (220.353 nm)	0.0137	ppm	0.0022	16.18	26.4000	0.0137 (ppm)
Sb (206.834 nm)	-0.0012 u	ppm	0.0033	> 100.00	1.7610	-0.0012 u (ppm)
Se (196.026 nm)	0.0094	ppm	0.0070	75.18	2.4900	0.0094 (ppm)
Si (251.611 nm)	0.2014	ppm	0.0008	0.39	423.7000	0.2014 (ppm)
Sn (189.925 nm)	0.0018 u	ppm	0.0039	> 100.00	0.6737	0.0018 u (ppm)
Sr (421.552 nm)	0.1036	ppm	0.0006	0.60	35910.0000	0.1036 (ppm)
Ti (336.122 nm)	0.5013	ppm	0.0019	0.38	50160.0000	0.5013 (ppm)
Tl (190.794 nm)	-0.0030 u	ppm	0.0014	48.09	-2.7300	-0.0030 u (ppm)
V (292.401 nm)	0.0503	ppm	0.0002	0.48	1635.0000	0.0503 (ppm)
W (207.912 nm)	0.0056	ppm	0.0012	22.20	3.2390	0.0056 (ppm)
Zn (202.548 nm)	0.0352	ppm	0.0001	0.24	553.3000	0.0352 (ppm)
Zr (343.823 nm)	0.0107	ppm	0.0000	0.45	1257.0000	0.0107 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9619	364100.0000	0.0015	0.16
Y_R 371.029	0.9799	49700.0000	0.0114	1.16

Sample Name: 440-258875-B-1-A@5

Date: 1/15/2020 3:37:31 PM

Rack:Tube: 1:39

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0013 u	ppm	0.0004	27.95	-185.4000	-0.0013 u (ppm)
Al (396.152 nm)	56.8300	ppm	0.1935	0.34	1722000.0000	56.8300 (ppm)
As (188.980 nm)	0.0418	ppm	0.0076	18.20	18.0400	0.0418 (ppm)
B (249.678 nm)	0.0330	ppm	0.0002	0.73	215.5000	0.0330 (ppm)
Ba (233.527 nm)	0.6281	ppm	0.0018	0.29	53740.0000	0.6281 (ppm)
Be (234.861 nm)	0.0027	ppm	0.0001	3.88	2058.0000	0.0027 (ppm)
Ca (422.673 nm)	53.2300	ppm	0.1119	0.21	207600.0000	53.2300 (ppm)
Cd (214.439 nm)	0.0002	ppm	0.0000	22.87	14.9500	0.0002 (ppm)
Co (228.615 nm)	0.0367	ppm	0.0002	0.50	536.5000	0.0367 (ppm)
Cr (205.560 nm)	0.0475	ppm	0.0009	1.90	214.7000	0.0475 (ppm)
Cu (324.754 nm)	0.5407	ppm	0.0017	0.31	21300.0000	0.5407 (ppm)
Fe (238.204 nm)	106.3000	ppm	0.0178	0.02	268200.0000	106.3000 (ppm)
K (766.491 nm)	8.7470	ppm	0.0541	0.62	8829.0000	8.7470 (ppm)
Li (670.783 nm)	0.0571	ppm	0.0004	0.75	3042.0000	0.0571 (ppm)
Mg (279.078 nm)	24.9000	ppm	0.0351	0.14	67180.0000	24.9000 (ppm)
Mn (259.372 nm)	1.6940	ppm	0.0071	0.42	168300.0000	1.6940 (ppm)
Mo (204.598 nm)	0.0039	ppm	0.0010	25.54	20.7000	0.0039 (ppm)
Na (589.592 nm)	2.4480	ppm	0.0090	0.37	14670.0000	2.4480 (ppm)
Ni (231.604 nm)	0.0386	ppm	0.0009	2.42	151.5000	0.0386 (ppm)
P (213.618 nm)	3.3740	ppm	0.0106	0.31	2510.0000	3.3740 (ppm)
Pb (220.353 nm)	0.0520	ppm	0.0004	0.77	64.1600	0.0520 (ppm)
Sb (206.834 nm)	0.0073	ppm	0.0041	56.50	10.2800	0.0073 (ppm)
Se (196.026 nm)	0.0058 u	ppm	0.0098	> 100.00	-18.7600	0.0058 u (ppm)
Si (251.611 nm)	0.9958	ppm	0.0012	0.12	2096.0000	0.9958 (ppm)
Sn (189.925 nm)	-0.0057 u	ppm	0.0044	76.61	-3.6600	-0.0057 u (ppm)
Sr (421.552 nm)	0.5217	ppm	0.0006	0.11	180900.0000	0.5217 (ppm)
Ti (336.122 nm)	2.5690	ppm	0.0110	0.43	257700.0000	2.5690 (ppm)
Tl (190.794 nm)	-0.0247 u	ppm	0.0029	11.60	-47.3100	-0.0247 u (ppm)
V (292.401 nm)	0.2529	ppm	0.0010	0.40	7925.0000	0.2529 (ppm)
W (207.912 nm)	0.0038	ppm	0.0007	17.31	0.2223	0.0038 (ppm)
Zn (202.548 nm)	0.1692	ppm	0.0008	0.45	2627.0000	0.1692 (ppm)
Zr (343.823 nm)	0.0622	ppm	0.0007	1.16	3720.0000	0.0622 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9439	357200.0000	0.0023	0.24
Y_R 371.029	0.9655	48970.0000	0.0010	0.10

Sample Name: CCV 6043773

Date: 1/15/2020 4:00:31 PM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

**Analyte Results**

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.5022	ppm	0.0009	0.18	20270.0000	0.5022 (ppm)
Al (396.152 nm)	1.0020	ppm	0.0010	0.10	31150.0000	1.0020 (ppm)
As (188.980 nm)	1.0020	ppm	0.0029	0.29	600.6000	1.0020 (ppm)
B (249.678 nm)	1.0090	ppm	0.0021	0.21	10670.0000	1.0090 (ppm)
Ba (233.527 nm)	1.0130	ppm	0.0009	0.09	86570.0000	1.0130 (ppm)
Be (234.861 nm)	1.0090	ppm	0.0016	0.16	158400.0000	1.0090 (ppm)
Ca (422.673 nm)	5.0330	ppm	0.0044	0.09	19700.0000	5.0330 (ppm)
Cd (214.439 nm)	1.0100	ppm	0.0021	0.20	21810.0000	1.0100 (ppm)
Co (228.615 nm)	1.0090	ppm	0.0023	0.23	13030.0000	1.0090 (ppm)
Cr (205.560 nm)	1.0080	ppm	0.0016	0.16	4474.0000	1.0080 (ppm)
Cu (324.754 nm)	1.0140	ppm	0.0028	0.28	39820.0000	1.0140 (ppm)
Fe (238.204 nm)	1.0240	ppm	0.0014	0.14	2527.0000	1.0240 (ppm)
K (766.491 nm)	10.0300	ppm	0.0385	0.38	10110.0000	10.0300 (ppm)
Li (670.783 nm)	1.0040	ppm	0.0003	0.03	57140.0000	1.0040 (ppm)
Mg (279.078 nm)	5.0920	ppm	0.0102	0.20	13760.0000	5.0920 (ppm)
Mn (259.372 nm)	1.0070	ppm	0.0022	0.22	93570.0000	1.0070 (ppm)
Mo (204.598 nm)	1.0050	ppm	0.0007	0.07	3870.0000	1.0050 (ppm)
Na (589.592 nm)	9.9980	ppm	0.0020	0.02	53680.0000	9.9980 (ppm)
Ni (231.604 nm)	1.0110	ppm	0.0035	0.35	4425.0000	1.0110 (ppm)
P (213.618 nm)	1.0090	ppm	0.0068	0.67	712.4000	1.0090 (ppm)
Pb (220.353 nm)	1.0090	ppm	0.0010	0.10	2001.0000	1.0090 (ppm)
Sb (206.834 nm)	1.0130	ppm	0.0141	1.39	888.4000	1.0130 (ppm)
Se (196.026 nm)	1.0040	ppm	0.0039	0.39	618.3000	1.0040 (ppm)
Si (251.611 nm)	5.0480	ppm	0.0471	0.93	10680.0000	5.0480 (ppm)
Sn (189.925 nm)	1.0010	ppm	0.0024	0.24	577.3000	1.0010 (ppm)
Sr (421.552 nm)	1.0050	ppm	0.0000	0.00	347500.0000	1.0050 (ppm)
Ti (336.122 nm)	1.0120	ppm	0.0069	0.68	101400.0000	1.0120 (ppm)
Tl (190.794 nm)	1.0100	ppm	0.0057	0.56	1093.0000	1.0100 (ppm)
V (292.401 nm)	1.0100	ppm	0.0033	0.32	30690.0000	1.0100 (ppm)
W (207.912 nm)	1.0050	ppm	0.0003	0.03	1642.0000	1.0050 (ppm)
Zn (202.548 nm)	1.0130	ppm	0.0016	0.16	15710.0000	1.0130 (ppm)
Zr (343.823 nm)	1.0240	ppm	0.0044	0.43	83650.0000	1.0240 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9663	365700.0000	0.0007	0.07
Y_R 371.029	0.9729	49350.0000	0.0009	0.09

Sample Name: CCB 6043772

Date: 1/15/2020 4:06:03 PM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0001 u	ppm	0.0001	> 100.00	42.6800	-0.0001 u (ppm)
Al (396.152 nm)	0.0008	ppm	0.0003	41.64	-300.0000	0.0008 (ppm)
As (188.980 nm)	0.0063	ppm	0.0024	37.83	2.5360	0.0063 (ppm)
B (249.678 nm)	0.0015	ppm	0.0000	1.43	2.7810	0.0015 (ppm)
Ba (233.527 nm)	0.0001	ppm	0.0000	34.72	66.5800	0.0001 (ppm)
Be (234.861 nm)	0.0001	ppm	0.0000	11.58	36.3300	0.0001 (ppm)
Ca (422.673 nm)	0.0079	ppm	0.0044	55.92	111.0000	0.0079 (ppm)
Cd (214.439 nm)	0.0003	ppm	0.0003	> 100.00	0.1410	0.0003 (ppm)
Co (228.615 nm)	0.0001 u	ppm	0.0004	> 100.00	-7.1430	0.0001 u (ppm)
Cr (205.560 nm)	-0.0002 u	ppm	0.0006	> 100.00	-0.4806	-0.0002 u (ppm)
Cu (324.754 nm)	0.0006	ppm	0.0000	4.31	156.2000	0.0006 (ppm)
Fe (238.204 nm)	-0.0018 u	ppm	0.0008	45.65	-60.0400	-0.0018 u (ppm)
K (766.491 nm)	-0.0067 u	ppm	0.0807	> 100.00	-132.5000	-0.0067 u (ppm)
Li (670.783 nm)	-0.0012 u	ppm	0.0014	> 100.00	60.3300	-0.0012 u (ppm)
Mg (279.078 nm)	0.0012 u	ppm	0.0026	> 100.00	17.5400	0.0012 u (ppm)
Mn (259.372 nm)	0.0002	ppm	0.0001	33.76	58.6300	0.0002 (ppm)
Mo (204.598 nm)	0.0012	ppm	0.0003	21.31	2.8220	0.0012 (ppm)
Na (589.592 nm)	-0.0866 u	ppm	0.0045	5.19	444.5000	-0.0866 u (ppm)
Ni (231.604 nm)	0.0016	ppm	0.0001	4.91	-4.9120	0.0016 (ppm)
P (213.618 nm)	-0.0042 u	ppm	0.0010	23.91	0.9490	-0.0042 u (ppm)
Pb (220.353 nm)	0.0003 u	ppm	0.0016	> 100.00	9.1930	0.0003 u (ppm)
Sb (206.834 nm)	0.0028	ppm	0.0031	> 100.00	5.0180	0.0028 (ppm)
Se (196.026 nm)	0.0022 u	ppm	0.0036	> 100.00	2.8520	0.0022 u (ppm)
Si (251.611 nm)	0.0002 u	ppm	0.0011	> 100.00	0.0722	0.0002 u (ppm)
Sn (189.925 nm)	-0.0022 u	ppm	0.0032	> 100.00	-1.5900	-0.0022 u (ppm)
Sr (421.552 nm)	0.0000 u	ppm	0.0001	> 100.00	-29.0300	0.0000 u (ppm)
Ti (336.122 nm)	0.0009	ppm	0.0002	28.33	-71.3200	0.0009 (ppm)
Tl (190.794 nm)	0.0031	ppm	0.0005	16.85	8.9340	0.0031 (ppm)
V (292.401 nm)	0.0001	ppm	0.0000	20.60	79.6900	0.0001 (ppm)
W (207.912 nm)	0.0034	ppm	0.0024	68.54	-0.2138	0.0034 (ppm)
Zn (202.548 nm)	0.0004	ppm	0.0000	10.43	15.2200	0.0004 (ppm)
Zr (343.823 nm)	0.0005	ppm	0.0001	16.14	852.2000	0.0005 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9750	369000.0000	0.0012	0.12
Y_R 371.029	0.9797	49690.0000	0.0092	0.94

Sample Name: 440-258875-B-1-B MS@5

Date: 1/15/2020 4:08:15 PM

Rack:Tube: 1:40

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.1724	ppm	0.0003	0.18	6815.0000	0.1724 (ppm)
Al (396.152 nm)	70.8400	ppm	0.1810	0.26	2147000.0000	70.8400 (ppm)
As (188.980 nm)	0.3780	ppm	0.0007	0.18	220.5000	0.3780 (ppm)
B (249.678 nm)	0.3627	ppm	0.0012	0.33	3729.0000	0.3627 (ppm)
Ba (233.527 nm)	1.2670	ppm	0.0141	1.11	108300.0000	1.2670 (ppm)
Be (234.861 nm)	0.3496	ppm	0.0008	0.24	56330.0000	0.3496 (ppm)
Ca (422.673 nm)	62.0400	ppm	0.3618	0.58	241900.0000	62.0400 (ppm)
Cd (214.439 nm)	0.3368	ppm	0.0009	0.26	7281.0000	0.3368 (ppm)
Co (228.615 nm)	0.3682	ppm	0.0024	0.64	4830.0000	0.3682 (ppm)
Cr (205.560 nm)	0.3971	ppm	0.0018	0.46	1766.0000	0.3971 (ppm)
Cu (324.754 nm)	0.8519	ppm	0.0013	0.16	33470.0000	0.8519 (ppm)
Fe (238.204 nm)	96.0300	ppm	0.3594	0.37	242300.0000	96.0300 (ppm)
K (766.491 nm)	13.2100	ppm	0.1328	1.01	13380.0000	13.2100 (ppm)
Li (670.783 nm)	0.4056	ppm	0.0026	0.63	22960.0000	0.4056 (ppm)
Mg (279.078 nm)	25.8100	ppm	0.2753	1.07	69650.0000	25.8100 (ppm)
Mn (259.372 nm)	2.2510	ppm	0.0053	0.24	218800.0000	2.2510 (ppm)
Mo (204.598 nm)	0.3602	ppm	0.0029	0.80	1395.0000	0.3602 (ppm)
Na (589.592 nm)	7.2570	ppm	0.0466	0.64	39960.0000	7.2570 (ppm)
Ni (231.604 nm)	0.3718	ppm	0.0020	0.53	1614.0000	0.3718 (ppm)
P (213.618 nm)	3.5680	ppm	0.0081	0.23	2640.0000	3.5680 (ppm)
Pb (220.353 nm)	0.3758	ppm	0.0003	0.07	706.3000	0.3758 (ppm)
Sb (206.834 nm)	0.2537	ppm	0.0000	0.01	225.2000	0.2537 (ppm)
Se (196.026 nm)	0.3339	ppm	0.0145	4.36	184.4000	0.3339 (ppm)
Si (251.611 nm)	1.1400	ppm	0.0028	0.25	2442.0000	1.1400 (ppm)
Sn (189.925 nm)	0.3495	ppm	0.0033	0.93	201.2000	0.3495 (ppm)
Sr (421.552 nm)	1.0810	ppm	0.0064	0.59	374400.0000	1.0810 (ppm)
Ti (336.122 nm)	3.3090	ppm	0.0140	0.42	332000.0000	3.3090 (ppm)
Tl (190.794 nm)	0.2987	ppm	0.0007	0.25	295.2000	0.2987 (ppm)
V (292.401 nm)	0.5896	ppm	0.0018	0.31	18150.0000	0.5896 (ppm)
W (207.912 nm)	0.2284	ppm	0.0009	0.39	369.9000	0.2284 (ppm)
Zn (202.548 nm)	0.5048	ppm	0.0016	0.33	7828.0000	0.5048 (ppm)
Zr (343.823 nm)	0.3127	ppm	0.0022	0.69	24180.0000	0.3127 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029

Label	Internal Standard
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

**Internal Standards Results**

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9391	355500.0000	0.0014	0.15
Y_R 371.029	0.9671	49060.0000	0.0098	1.01

Sample Name: 440-258875-B-1-C MSD@5

Date: 1/15/2020 4:10:27 PM

Rack:Tube: 1:41

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.1766	ppm	0.0000	0.02	6972.0000	0.1766 (ppm)
Al (396.152 nm)	72.5400	ppm	0.1101	0.15	2199000.0000	72.5400 (ppm)
As (188.980 nm)	0.3859	ppm	0.0019	0.49	224.7000	0.3859 (ppm)
B (249.678 nm)	0.3757	ppm	0.0009	0.24	3855.0000	0.3757 (ppm)
Ba (233.527 nm)	0.8816	ppm	0.0026	0.30	75390.0000	0.8816 (ppm)
Be (234.861 nm)	0.3574	ppm	0.0000	0.00	57710.0000	0.3574 (ppm)
Ca (422.673 nm)	57.6500	ppm	0.3638	0.63	224800.0000	57.6500 (ppm)
Cd (214.439 nm)	0.3454	ppm	0.0002	0.05	7468.0000	0.3454 (ppm)
Co (228.615 nm)	0.3790	ppm	0.0013	0.34	4983.0000	0.3790 (ppm)
Cr (205.560 nm)	0.4162	ppm	0.0023	0.55	1851.0000	0.4162 (ppm)
Cu (324.754 nm)	0.9072	ppm	0.0018	0.19	35640.0000	0.9072 (ppm)
Fe (238.204 nm)	106.5000	ppm	0.7734	0.73	268900.0000	106.5000 (ppm)
K (766.491 nm)	13.3300	ppm	0.0805	0.60	13500.0000	13.3300 (ppm)
Li (670.783 nm)	0.4206	ppm	0.0040	0.96	23780.0000	0.4206 (ppm)
Mg (279.078 nm)	29.9100	ppm	0.1476	0.49	80690.0000	29.9100 (ppm)
Mn (259.372 nm)	2.0310	ppm	0.0005	0.03	199600.0000	2.0310 (ppm)
Mo (204.598 nm)	0.3701	ppm	0.0004	0.12	1434.0000	0.3701 (ppm)
Na (589.592 nm)	6.2560	ppm	0.0521	0.83	34770.0000	6.2560 (ppm)
Ni (231.604 nm)	0.3858	ppm	0.0028	0.71	1675.0000	0.3858 (ppm)
P (213.618 nm)	3.9760	ppm	0.0111	0.28	2942.0000	3.9760 (ppm)
Pb (220.353 nm)	0.3867	ppm	0.0000	0.01	723.0000	0.3867 (ppm)
Sb (206.834 nm)	0.2575	ppm	0.0074	2.86	228.6000	0.2575 (ppm)
Se (196.026 nm)	0.3334	ppm	0.0118	3.54	181.7000	0.3334 (ppm)
Si (251.611 nm)	1.3220	ppm	0.0017	0.13	2829.0000	1.3220 (ppm)
Sn (189.925 nm)	0.3501	ppm	0.0058	1.66	201.6000	0.3501 (ppm)
Sr (421.552 nm)	0.8246	ppm	0.0045	0.54	285800.0000	0.8246 (ppm)
Ti (336.122 nm)	3.7980	ppm	0.0068	0.18	381100.0000	3.7980 (ppm)
Tl (190.794 nm)	0.3041	ppm	0.0057	1.87	295.1000	0.3041 (ppm)
V (292.401 nm)	0.6232	ppm	0.0003	0.05	19180.0000	0.6232 (ppm)
W (207.912 nm)	0.2404	ppm	0.0045	1.87	389.7000	0.2404 (ppm)
Zn (202.548 nm)	0.5277	ppm	0.0000	0.01	8185.0000	0.5277 (ppm)
Zr (343.823 nm)	0.4182	ppm	0.0012	0.29	32500.0000	0.4182 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9345	353700.0000	0.0006	0.07
Y_R 371.029	0.9605	48720.0000	0.0029	0.31

Sample Name: 440-258875-B-1-A PDS@5

Date: 1/15/2020 4:12:39 PM

Rack:Tube: 1:42

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.1958	ppm	0.0001	0.08	7756.0000	0.1958 (ppm)
Al (396.152 nm)	57.8900	ppm	0.1623	0.28	1755000.0000	57.8900 (ppm)
As (188.980 nm)	0.4361	ppm	0.0004	0.10	255.0000	0.4361 (ppm)
B (249.678 nm)	0.4258	ppm	0.0016	0.37	4373.0000	0.4258 (ppm)
Ba (233.527 nm)	1.0170	ppm	0.0052	0.51	86960.0000	1.0170 (ppm)
Be (234.861 nm)	0.3948	ppm	0.0005	0.13	63580.0000	0.3948 (ppm)
Ca (422.673 nm)	55.5000	ppm	0.2354	0.42	216500.0000	55.5000 (ppm)
Cd (214.439 nm)	0.3824	ppm	0.0009	0.22	8267.0000	0.3824 (ppm)
Co (228.615 nm)	0.4132	ppm	0.0026	0.63	5406.0000	0.4132 (ppm)
Cr (205.560 nm)	0.4437	ppm	0.0010	0.23	1973.0000	0.4437 (ppm)
Cu (324.754 nm)	0.9391	ppm	0.0010	0.11	36890.0000	0.9391 (ppm)
Fe (238.204 nm)	106.8000	ppm	0.4561	0.43	269500.0000	106.8000 (ppm)
K (766.491 nm)	12.8300	ppm	0.1209	0.94	13000.0000	12.8300 (ppm)
Li (670.783 nm)	0.4533	ppm	0.0056	1.23	25550.0000	0.4533 (ppm)
Mg (279.078 nm)	26.8800	ppm	0.1195	0.44	72530.0000	26.8800 (ppm)
Mn (259.372 nm)	2.0940	ppm	0.0025	0.12	205500.0000	2.0940 (ppm)
Mo (204.598 nm)	0.4269	ppm	0.0011	0.25	1651.0000	0.4269 (ppm)
Na (589.592 nm)	6.4190	ppm	0.0602	0.94	35630.0000	6.4190 (ppm)
Ni (231.604 nm)	0.4234	ppm	0.0015	0.34	1839.0000	0.4234 (ppm)
P (213.618 nm)	3.7990	ppm	0.0227	0.60	2808.0000	3.7990 (ppm)
Pb (220.353 nm)	0.4396	ppm	0.0037	0.84	829.1000	0.4396 (ppm)
Sb (206.834 nm)	0.4089	ppm	0.0031	0.77	361.1000	0.4089 (ppm)
Se (196.026 nm)	0.3727	ppm	0.0040	1.08	206.6000	0.3727 (ppm)
Si (251.611 nm)	2.9460	ppm	0.0038	0.13	6224.0000	2.9460 (ppm)
Sn (189.925 nm)	0.3948	ppm	0.0073	1.84	227.4000	0.3948 (ppm)
Sr (421.552 nm)	0.9188	ppm	0.0047	0.52	318300.0000	0.9188 (ppm)
Ti (336.122 nm)	3.0030	ppm	0.0054	0.18	301300.0000	3.0030 (ppm)
Tl (190.794 nm)	0.3582	ppm	0.0039	1.09	364.2000	0.3582 (ppm)
V (292.401 nm)	0.6562	ppm	0.0008	0.13	20150.0000	0.6562 (ppm)
W (207.912 nm)	0.3985	ppm	0.0041	1.04	647.2000	0.3985 (ppm)
Zn (202.548 nm)	0.5453	ppm	0.0009	0.17	8457.0000	0.5453 (ppm)
Zr (343.823 nm)	0.5209	ppm	0.0004	0.07	40810.0000	0.5209 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9395	355600.0000	0.0000	0.00
Y_R 371.029	0.9653	48960.0000	0.0036	0.38

Sample Name: 440-258875-B-2-A@5

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Rack:Tube: 1:43

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0006 u	ppm	0.0003	46.85	-164.3000	-0.0006 u (ppm)
Al (396.152 nm)	60.0600	ppm	0.0164	0.03	1820000.0000	60.0600 (ppm)
As (188.980 nm)	0.0423	ppm	0.0034	8.09	18.0200	0.0423 (ppm)
B (249.678 nm)	0.0360	ppm	0.0008	2.20	241.6000	0.0360 (ppm)
Ba (233.527 nm)	0.5460	ppm	0.0048	0.88	46720.0000	0.5460 (ppm)
Be (234.861 nm)	0.0028	ppm	0.0000	1.71	2135.0000	0.0028 (ppm)
Ca (422.673 nm)	47.1800	ppm	0.2416	0.51	184000.0000	47.1800 (ppm)
Cd (214.439 nm)	0.0002	ppm	0.0000	17.65	15.4000	0.0002 (ppm)
Co (228.615 nm)	0.0331	ppm	0.0014	4.21	496.1000	0.0331 (ppm)
Cr (205.560 nm)	0.0595	ppm	0.0012	2.09	268.1000	0.0595 (ppm)
Cu (324.754 nm)	0.5348	ppm	0.0001	0.02	21080.0000	0.5348 (ppm)
Fe (238.204 nm)	110.1000	ppm	0.5241	0.48	277900.0000	110.1000 (ppm)
K (766.491 nm)	9.0360	ppm	0.0043	0.05	9125.0000	9.0360 (ppm)
Li (670.783 nm)	0.0625	ppm	0.0004	0.56	3331.0000	0.0625 (ppm)
Mg (279.078 nm)	25.1000	ppm	0.2246	0.90	67710.0000	25.1000 (ppm)
Mn (259.372 nm)	1.7970	ppm	0.0021	0.12	178200.0000	1.7970 (ppm)
Mo (204.598 nm)	0.0063	ppm	0.0017	26.56	30.4600	0.0063 (ppm)
Na (589.592 nm)	3.8760	ppm	0.0382	0.99	22230.0000	3.8760 (ppm)
Ni (231.604 nm)	0.0401	ppm	0.0006	1.51	157.6000	0.0401 (ppm)
P (213.618 nm)	3.5790	ppm	0.0225	0.63	2663.0000	3.5790 (ppm)
Pb (220.353 nm)	0.0454	ppm	0.0021	4.61	49.0000	0.0454 (ppm)
Sb (206.834 nm)	0.0029	ppm	0.0006	20.89	6.5630	0.0029 (ppm)
Se (196.026 nm)	0.0180	ppm	0.0027	15.22	-12.2400	0.0180 (ppm)
Si (251.611 nm)	1.0110	ppm	0.0011	0.11	2131.0000	1.0110 (ppm)
Sn (189.925 nm)	0.0021	ppm	0.0016	74.53	0.8449	0.0021 (ppm)
Sr (421.552 nm)	0.4545	ppm	0.0021	0.46	157700.0000	0.4545 (ppm)
Ti (336.122 nm)	2.8690	ppm	0.0035	0.12	287800.0000	2.8690 (ppm)
Tl (190.794 nm)	-0.0278 u	ppm	0.0043	15.34	-54.1300	-0.0278 u (ppm)
V (292.401 nm)	0.2734	ppm	0.0000	0.01	8550.0000	0.2734 (ppm)
W (207.912 nm)	0.0090	ppm	0.0018	20.55	9.0060	0.0090 (ppm)
Zn (202.548 nm)	0.1908	ppm	0.0002	0.08	2959.0000	0.1908 (ppm)
Zr (343.823 nm)	0.0704	ppm	0.0003	0.48	4291.0000	0.0704 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9432	357000.0000	0.0020	0.21
Y_R 371.029	0.9633	48860.0000	0.0098	1.02

Sample Name: 440-258875-B-3-A@5

Date: 1/15/2020 4:17:03 PM

Rack:Tube: 1:44

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0009 u	ppm	0.0000	3.19	-167.6000	-0.0009 u (ppm)
Al (396.152 nm)	58.8300	ppm	0.5931	1.01	1783000.0000	58.8300 (ppm)
As (188.980 nm)	0.0472	ppm	0.0016	3.45	21.4200	0.0472 (ppm)
B (249.678 nm)	0.0364	ppm	0.0020	5.39	253.6000	0.0364 (ppm)
Ba (233.527 nm)	0.6840	ppm	0.0051	0.75	58520.0000	0.6840 (ppm)
Be (234.861 nm)	0.0026	ppm	0.0001	4.26	2022.0000	0.0026 (ppm)
Ca (422.673 nm)	47.1500	ppm	0.0455	0.10	183900.0000	47.1500 (ppm)
Cd (214.439 nm)	0.0001 u	ppm	0.0002	> 100.00	12.8300	0.0001 u (ppm)
Co (228.615 nm)	0.0348	ppm	0.0001	0.30	513.7000	0.0348 (ppm)
Cr (205.560 nm)	0.0530	ppm	0.0006	1.09	239.3000	0.0530 (ppm)
Cu (324.754 nm)	0.5340	ppm	0.0053	1.00	21050.0000	0.5340 (ppm)
Fe (238.204 nm)	104.3000	ppm	0.1588	0.15	263300.0000	104.3000 (ppm)
K (766.491 nm)	8.9330	ppm	0.1137	1.27	9019.0000	8.9330 (ppm)
Li (670.783 nm)	0.0571	ppm	0.0000	0.02	3044.0000	0.0571 (ppm)
Mg (279.078 nm)	25.1800	ppm	0.1701	0.68	67930.0000	25.1800 (ppm)
Mn (259.372 nm)	2.0520	ppm	0.0165	0.80	201100.0000	2.0520 (ppm)
Mo (204.598 nm)	0.0032	ppm	0.0012	37.51	18.5900	0.0032 (ppm)
Na (589.592 nm)	4.2960	ppm	0.0047	0.11	24400.0000	4.2960 (ppm)
Ni (231.604 nm)	0.0404	ppm	0.0001	0.16	159.1000	0.0404 (ppm)
P (213.618 nm)	4.1450	ppm	0.0441	1.06	3085.0000	4.1450 (ppm)
Pb (220.353 nm)	0.0439	ppm	0.0029	6.68	48.7700	0.0439 (ppm)
Sb (206.834 nm)	0.0029 u	ppm	0.0043	> 100.00	6.4840	0.0029 u (ppm)
Se (196.026 nm)	0.0100	ppm	0.0040	40.15	-15.7300	0.0100 (ppm)
Si (251.611 nm)	0.8150	ppm	0.0044	0.54	1721.0000	0.8150 (ppm)
Sn (189.925 nm)	0.0041	ppm	0.0016	37.86	2.0080	0.0041 (ppm)
Sr (421.552 nm)	0.4636	ppm	0.0007	0.15	160800.0000	0.4636 (ppm)
Ti (336.122 nm)	2.6710	ppm	0.0231	0.86	268000.0000	2.6710 (ppm)
Tl (190.794 nm)	-0.0286 u	ppm	0.0024	8.54	-52.4900	-0.0286 u (ppm)
V (292.401 nm)	0.2608	ppm	0.0026	0.99	8163.0000	0.2608 (ppm)
W (207.912 nm)	0.0051	ppm	0.0014	27.97	2.6530	0.0051 (ppm)
Zn (202.548 nm)	0.1821	ppm	0.0023	1.26	2828.0000	0.1821 (ppm)
Zr (343.823 nm)	0.0713	ppm	0.0011	1.56	4486.0000	0.0713 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9515	360100.0000	0.0069	0.73
Y_R 371.029	0.9639	48890.0000	0.0083	0.86

Sample Name: 440-258875-B-4-A@5

Date: 1/15/2020 4:19:15 PM

Rack:Tube: 1:45

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0014 u	ppm	0.0003	23.25	-182.5000	-0.0014 u (ppm)
Al (396.152 nm)	59.9700	ppm	0.0274	0.05	1817000.0000	59.9700 (ppm)
As (188.980 nm)	0.0403	ppm	0.0022	5.43	17.2700	0.0403 (ppm)
B (249.678 nm)	0.0369	ppm	0.0016	4.22	261.7000	0.0369 (ppm)
Ba (233.527 nm)	0.5736	ppm	0.0004	0.07	49080.0000	0.5736 (ppm)
Be (234.861 nm)	0.0029	ppm	0.0001	2.46	2040.0000	0.0029 (ppm)
Ca (422.673 nm)	48.4600	ppm	0.0986	0.20	189000.0000	48.4600 (ppm)
Cd (214.439 nm)	0.0002	ppm	0.0002	> 100.00	13.8900	0.0002 (ppm)
Co (228.615 nm)	0.0328	ppm	0.0004	1.23	481.9000	0.0328 (ppm)
Cr (205.560 nm)	0.0581	ppm	0.0005	0.89	261.9000	0.0581 (ppm)
Cu (324.754 nm)	0.5032	ppm	0.0002	0.03	19840.0000	0.5032 (ppm)
Fe (238.204 nm)	102.5000	ppm	0.1463	0.14	258700.0000	102.5000 (ppm)
K (766.491 nm)	8.9250	ppm	0.0321	0.36	9009.0000	8.9250 (ppm)
Li (670.783 nm)	0.0565	ppm	0.0019	3.43	3036.0000	0.0565 (ppm)
Mg (279.078 nm)	25.5400	ppm	0.0153	0.06	68910.0000	25.5400 (ppm)
Mn (259.372 nm)	1.6370	ppm	0.0019	0.12	162600.0000	1.6370 (ppm)
Mo (204.598 nm)	0.0037	ppm	0.0010	28.33	20.2100	0.0037 (ppm)
Na (589.592 nm)	4.1530	ppm	0.0034	0.08	23630.0000	4.1530 (ppm)
Ni (231.604 nm)	0.0387	ppm	0.0001	0.24	152.0000	0.0387 (ppm)
P (213.618 nm)	3.8590	ppm	0.0088	0.23	2872.0000	3.8590 (ppm)
Pb (220.353 nm)	0.0383	ppm	0.0034	8.82	38.3400	0.0383 (ppm)
Sb (206.834 nm)	0.0002 u	ppm	0.0037	> 100.00	4.1610	0.0002 u (ppm)
Se (196.026 nm)	0.0094	ppm	0.0005	5.16	-15.8000	0.0094 (ppm)
Si (251.611 nm)	0.7832	ppm	0.0007	0.09	1652.0000	0.7832 (ppm)
Sn (189.925 nm)	0.0032	ppm	0.0043	> 100.00	1.4850	0.0032 (ppm)
Sr (421.552 nm)	0.4853	ppm	0.0010	0.21	168300.0000	0.4853 (ppm)
Ti (336.122 nm)	2.4290	ppm	0.0001	0.00	243700.0000	2.4290 (ppm)
Tl (190.794 nm)	-0.0240 u	ppm	0.0012	4.90	-44.9900	-0.0240 u (ppm)
V (292.401 nm)	0.2517	ppm	0.0002	0.07	7880.0000	0.2517 (ppm)
W (207.912 nm)	0.0036	ppm	0.0012	33.48	0.1013	0.0036 (ppm)
Zn (202.548 nm)	0.1811	ppm	0.0005	0.29	2808.0000	0.1811 (ppm)
Zr (343.823 nm)	0.0736	ppm	0.0003	0.37	4711.0000	0.0736 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9437	357200.0000	0.0011	0.12
Y_R 371.029	0.9686	49130.0000	0.0022	0.22

Sample Name: 440-258875-B-5-A@5

Date: 1/15/2020 4:21:27 PM

Rack:Tube: 1:46

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0009 u	ppm	0.0003	33.37	-193.2000	-0.0009 u (ppm)
Al (396.152 nm)	63.9500	ppm	0.0632	0.10	1938000.0000	63.9500 (ppm)
As (188.980 nm)	0.0623	ppm	0.0009	1.39	29.6200	0.0623 (ppm)
B (249.678 nm)	0.0413	ppm	0.0003	0.80	287.9000	0.0413 (ppm)
Ba (233.527 nm)	0.6520	ppm	0.0001	0.01	55780.0000	0.6520 (ppm)
Be (234.861 nm)	0.0027	ppm	0.0000	0.63	2273.0000	0.0027 (ppm)
Ca (422.673 nm)	50.6000	ppm	0.2976	0.59	197300.0000	50.6000 (ppm)
Cd (214.439 nm)	-0.0002 u	ppm	0.0000	8.37	9.2900	-0.0002 u (ppm)
Co (228.615 nm)	0.0332	ppm	0.0001	0.21	499.8000	0.0332 (ppm)
Cr (205.560 nm)	0.0668	ppm	0.0011	1.59	300.9000	0.0668 (ppm)
Cu (324.754 nm)	0.9070	ppm	0.0022	0.24	35640.0000	0.9070 (ppm)
Fe (238.204 nm)	119.8000	ppm	0.6490	0.54	302400.0000	119.8000 (ppm)
K (766.491 nm)	10.1100	ppm	0.0472	0.47	10220.0000	10.1100 (ppm)
Li (670.783 nm)	0.0670	ppm	0.0002	0.28	3520.0000	0.0670 (ppm)
Mg (279.078 nm)	26.9600	ppm	0.0091	0.03	72730.0000	26.9600 (ppm)
Mn (259.372 nm)	2.0580	ppm	0.0003	0.01	203500.0000	2.0580 (ppm)
Mo (204.598 nm)	0.0109	ppm	0.0008	7.24	48.7600	0.0109 (ppm)
Na (589.592 nm)	4.0430	ppm	0.0246	0.61	23190.0000	4.0430 (ppm)
Ni (231.604 nm)	0.0430	ppm	0.0004	0.98	170.0000	0.0430 (ppm)
P (213.618 nm)	3.8200	ppm	0.0051	0.13	2832.0000	3.8200 (ppm)
Pb (220.353 nm)	0.0806	ppm	0.0017	2.07	114.5000	0.0806 (ppm)
Sb (206.834 nm)	-0.0013 u	ppm	0.0014	> 100.00	2.9220	-0.0013 u (ppm)
Se (196.026 nm)	0.0103	ppm	0.0028	27.12	-19.0900	0.0103 (ppm)
Si (251.611 nm)	0.8757	ppm	0.0062	0.70	1849.0000	0.8757 (ppm)
Sn (189.925 nm)	-0.0015 u	ppm	0.0011	77.68	-1.2150	-0.0015 u (ppm)
Sr (421.552 nm)	0.4572	ppm	0.0033	0.73	158600.0000	0.4572 (ppm)
Ti (336.122 nm)	2.9340	ppm	0.0016	0.05	294400.0000	2.9340 (ppm)
Tl (190.794 nm)	-0.0282 u	ppm	0.0016	5.54	-54.5000	-0.0282 u (ppm)
V (292.401 nm)	0.2857	ppm	0.0008	0.27	8931.0000	0.2857 (ppm)
W (207.912 nm)	0.0048	ppm	0.0016	33.69	2.0450	0.0048 (ppm)
Zn (202.548 nm)	0.1910	ppm	0.0005	0.24	3002.0000	0.1910 (ppm)
Zr (343.823 nm)	0.0869	ppm	0.0001	0.15	5430.0000	0.0869 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9422	356600.0000	0.0010	0.10
Y_R 371.029	0.9622	48810.0000	0.0015	0.16

Sample Name: 440-258875-B-6-A@5

Date: 1/15/2020 4:23:39 PM

Rack:Tube: 1:47

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0017 u	ppm	0.0003	19.59	-219.9000	-0.0017 u (ppm)
Al (396.152 nm)	63.3100	ppm	0.0904	0.14	1919000.0000	63.3100 (ppm)
As (188.980 nm)	0.0536	ppm	0.0005	0.93	24.4800	0.0536 (ppm)
B (249.678 nm)	0.0382	ppm	0.0003	0.68	255.9000	0.0382 (ppm)
Ba (233.527 nm)	0.6332	ppm	0.0074	1.17	54180.0000	0.6332 (ppm)
Be (234.861 nm)	0.0028	ppm	0.0000	0.74	2267.0000	0.0028 (ppm)
Ca (422.673 nm)	53.7600	ppm	0.2835	0.53	209700.0000	53.7600 (ppm)
Cd (214.439 nm)	0.0003	ppm	0.0000	3.99	18.5200	0.0003 (ppm)
Co (228.615 nm)	0.0377	ppm	0.0002	0.44	550.4000	0.0377 (ppm)
Cr (205.560 nm)	0.0614	ppm	0.0002	0.28	277.1000	0.0614 (ppm)
Cu (324.754 nm)	0.9228	ppm	0.0060	0.65	36250.0000	0.9228 (ppm)
Fe (238.204 nm)	118.5000	ppm	0.7787	0.66	299200.0000	118.5000 (ppm)
K (766.491 nm)	9.9990	ppm	0.1702	1.70	10110.0000	9.9990 (ppm)
Li (670.783 nm)	0.0616	ppm	0.0027	4.37	3217.0000	0.0616 (ppm)
Mg (279.078 nm)	27.6300	ppm	0.3634	1.32	74540.0000	27.6300 (ppm)
Mn (259.372 nm)	2.1560	ppm	0.0040	0.19	212300.0000	2.1560 (ppm)
Mo (204.598 nm)	0.0087	ppm	0.0005	5.50	40.1100	0.0087 (ppm)
Na (589.592 nm)	4.0600	ppm	0.0465	1.15	23270.0000	4.0600 (ppm)
Ni (231.604 nm)	0.0449	ppm	0.0006	1.35	178.4000	0.0449 (ppm)
P (213.618 nm)	3.9470	ppm	0.0544	1.38	2927.0000	3.9470 (ppm)
Pb (220.353 nm)	0.0724	ppm	0.0026	3.55	99.2500	0.0724 (ppm)
Sb (206.834 nm)	0.0059	ppm	0.0018	30.90	9.1550	0.0059 (ppm)
Se (196.026 nm)	0.0088	ppm	0.0092	> 100.00	-19.6400	0.0088 (ppm)
Si (251.611 nm)	0.9529	ppm	0.0074	0.77	2007.0000	0.9529 (ppm)
Sn (189.925 nm)	-0.0019 u	ppm	0.0081	> 100.00	-1.4300	-0.0019 u (ppm)
Sr (421.552 nm)	0.4765	ppm	0.0024	0.51	165300.0000	0.4765 (ppm)
Ti (336.122 nm)	2.5870	ppm	0.0023	0.09	259500.0000	2.5870 (ppm)
Tl (190.794 nm)	-0.0284 u	ppm	0.0019	6.64	-50.3100	-0.0284 u (ppm)
V (292.401 nm)	0.2827	ppm	0.0006	0.21	8833.0000	0.2827 (ppm)
W (207.912 nm)	0.0057	ppm	0.0022	37.60	3.4280	0.0057 (ppm)
Zn (202.548 nm)	0.1819	ppm	0.0003	0.16	2864.0000	0.1819 (ppm)
Zr (343.823 nm)	0.0854	ppm	0.0002	0.18	5339.0000	0.0854 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9437	357200.0000	0.0004	0.04
Y_R 371.029	0.9597	48680.0000	0.0104	1.08

Sample Name: 440-258875-B-7-A@5

Date: 1/15/2020 4:25:51 PM

Rack:Tube: 1:48

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0012 u	ppm	0.0002	15.77	-201.8000	-0.0012 u (ppm)
Al (396.152 nm)	65.4600	ppm	0.2550	0.39	1984000.0000	65.4600 (ppm)
As (188.980 nm)	0.0552	ppm	0.0013	2.40	25.3100	0.0552 (ppm)
B (249.678 nm)	0.0433	ppm	0.0003	0.73	312.6000	0.0433 (ppm)
Ba (233.527 nm)	0.6710	ppm	0.0012	0.17	57400.0000	0.6710 (ppm)
Be (234.861 nm)	0.0029	ppm	0.0001	4.16	2259.0000	0.0029 (ppm)
Ca (422.673 nm)	73.1100	ppm	0.1154	0.16	285100.0000	73.1100 (ppm)
Cd (214.439 nm)	0.0005	ppm	0.0004	71.73	23.4900	0.0005 (ppm)
Co (228.615 nm)	0.0338	ppm	0.0013	3.80	508.5000	0.0338 (ppm)
Cr (205.560 nm)	0.0772	ppm	0.0008	1.02	347.4000	0.0772 (ppm)
Cu (324.754 nm)	1.0780	ppm	0.0041	0.38	42320.0000	1.0780 (ppm)
Fe (238.204 nm)	117.1000	ppm	0.4190	0.36	295500.0000	117.1000 (ppm)
K (766.491 nm)	11.0700	ppm	0.0035	0.03	11200.0000	11.0700 (ppm)
Li (670.783 nm)	0.0593	ppm	0.0003	0.56	3115.0000	0.0593 (ppm)
Mg (279.078 nm)	25.0100	ppm	0.0562	0.22	67470.0000	25.0100 (ppm)
Mn (259.372 nm)	2.0160	ppm	0.0092	0.46	199200.0000	2.0160 (ppm)
Mo (204.598 nm)	0.0135	ppm	0.0010	7.25	58.8500	0.0135 (ppm)
Na (589.592 nm)	4.3480	ppm	0.0281	0.65	24780.0000	4.3480 (ppm)
Ni (231.604 nm)	0.0423	ppm	0.0017	3.91	166.7000	0.0423 (ppm)
P (213.618 nm)	3.8400	ppm	0.0294	0.77	2842.0000	3.8400 (ppm)
Pb (220.353 nm)	0.0572	ppm	0.0017	3.05	69.2600	0.0572 (ppm)
Sb (206.834 nm)	0.0056	ppm	0.0048	86.36	9.0880	0.0056 (ppm)
Se (196.026 nm)	0.0112	ppm	0.0055	48.79	-18.0400	0.0112 (ppm)
Si (251.611 nm)	0.9120	ppm	0.0118	1.29	1925.0000	0.9120 (ppm)
Sn (189.925 nm)	-0.0006 u	ppm	0.0052	> 100.00	-0.7241	-0.0006 u (ppm)
Sr (421.552 nm)	0.4689	ppm	0.0012	0.26	162900.0000	0.4689 (ppm)
Ti (336.122 nm)	2.9380	ppm	0.0116	0.40	294800.0000	2.9380 (ppm)
Tl (190.794 nm)	-0.0298 u	ppm	0.0003	1.17	-56.4100	-0.0298 u (ppm)
V (292.401 nm)	0.2687	ppm	0.0009	0.32	8437.0000	0.2687 (ppm)
W (207.912 nm)	0.0003	ppm	0.0004	> 100.00	-5.5290	0.0003 (ppm)
Zn (202.548 nm)	0.1962	ppm	0.0015	0.74	3096.0000	0.1962 (ppm)
Zr (343.823 nm)	0.0929	ppm	0.0002	0.22	5979.0000	0.0929 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9388	355300.0000	0.0007	0.07
Y_R 371.029	0.9651	48950.0000	0.0054	0.56

Sample Name: 440-258875-B-8-A@5

Date: 1/15/2020 4:28:04 PM

Rack:Tube: 1:49

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0014 u	ppm	0.0002	13.40	-205.0000	-0.0014 u (ppm)
Al (396.152 nm)	68.0900	ppm	0.2524	0.37	2063000.0000	68.0900 (ppm)
As (188.980 nm)	0.0459	ppm	0.0014	3.15	19.6100	0.0459 (ppm)
B (249.678 nm)	0.0362	ppm	0.0010	2.81	235.2000	0.0362 (ppm)
Ba (233.527 nm)	0.7378	ppm	0.0011	0.15	63110.0000	0.7378 (ppm)
Be (234.861 nm)	0.0031	ppm	0.0000	0.83	2300.0000	0.0031 (ppm)
Ca (422.673 nm)	47.4600	ppm	0.0519	0.11	185100.0000	47.4600 (ppm)
Cd (214.439 nm)	0.0001	ppm	0.0000	32.05	14.3700	0.0001 (ppm)
Co (228.615 nm)	0.0332	ppm	0.0009	2.61	497.6000	0.0332 (ppm)
Cr (205.560 nm)	0.0905	ppm	0.0006	0.62	405.8000	0.0905 (ppm)
Cu (324.754 nm)	0.5623	ppm	0.0027	0.49	22160.0000	0.5623 (ppm)
Fe (238.204 nm)	118.0000	ppm	0.0051	0.00	297900.0000	118.0000 (ppm)
K (766.491 nm)	11.0300	ppm	0.0408	0.37	11160.0000	11.0300 (ppm)
Li (670.783 nm)	0.0615	ppm	0.0007	1.06	3234.0000	0.0615 (ppm)
Mg (279.078 nm)	27.3600	ppm	0.0660	0.24	73810.0000	27.3600 (ppm)
Mn (259.372 nm)	2.5100	ppm	0.0095	0.38	245000.0000	2.5100 (ppm)
Mo (204.598 nm)	0.0116	ppm	0.0013	11.34	51.7000	0.0116 (ppm)
Na (589.592 nm)	4.7970	ppm	0.0108	0.22	27150.0000	4.7970 (ppm)
Ni (231.604 nm)	0.0471	ppm	0.0001	0.23	188.1000	0.0471 (ppm)
P (213.618 nm)	4.1470	ppm	0.0234	0.56	3086.0000	4.1470 (ppm)
Pb (220.353 nm)	0.0646	ppm	0.0026	4.06	83.5100	0.0646 (ppm)
Sb (206.834 nm)	0.0017 u	ppm	0.0034	> 100.00	5.7560	0.0017 u (ppm)
Se (196.026 nm)	0.0076 u	ppm	0.0113	> 100.00	-20.1500	0.0076 u (ppm)
Si (251.611 nm)	0.8331	ppm	0.0158	1.90	1760.0000	0.8331 (ppm)
Sn (189.925 nm)	0.0013 u	ppm	0.0034	> 100.00	0.4088	0.0013 u (ppm)
Sr (421.552 nm)	0.5168	ppm	0.0006	0.11	179200.0000	0.5168 (ppm)
Ti (336.122 nm)	2.8300	ppm	0.0087	0.31	284000.0000	2.8300 (ppm)
Tl (190.794 nm)	-0.0260 u	ppm	0.0010	3.73	-49.8900	-0.0260 u (ppm)
V (292.401 nm)	0.2702	ppm	0.0015	0.56	8452.0000	0.2702 (ppm)
W (207.912 nm)	0.0051	ppm	0.0029	56.36	2.7460	0.0051 (ppm)
Zn (202.548 nm)	0.2071	ppm	0.0018	0.88	3210.0000	0.2071 (ppm)
Zr (343.823 nm)	0.0904	ppm	0.0001	0.12	5748.0000	0.0904 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9448	357600.0000	0.0011	0.12
Y_R 371.029	0.9676	49080.0000	0.0066	0.69

Sample Name: CCV 6043773

Date: 1/15/2020 4:34:19 PM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.5014	ppm	0.0015	0.29	20240.0000	0.5014 (ppm)
Al (396.152 nm)	1.0140	ppm	0.0034	0.33	31540.0000	1.0140 (ppm)
As (188.980 nm)	1.0090	ppm	0.0022	0.22	605.0000	1.0090 (ppm)
B (249.678 nm)	1.0060	ppm	0.0046	0.46	10630.0000	1.0060 (ppm)
Ba (233.527 nm)	1.0080	ppm	0.0063	0.63	86200.0000	1.0080 (ppm)
Be (234.861 nm)	1.0080	ppm	0.0012	0.12	158100.0000	1.0080 (ppm)
Ca (422.673 nm)	5.0160	ppm	0.0087	0.17	19640.0000	5.0160 (ppm)
Cd (214.439 nm)	1.0080	ppm	0.0021	0.21	21770.0000	1.0080 (ppm)
Co (228.615 nm)	1.0060	ppm	0.0025	0.24	13000.0000	1.0060 (ppm)
Cr (205.560 nm)	1.0050	ppm	0.0017	0.17	4459.0000	1.0050 (ppm)
Cu (324.754 nm)	1.0100	ppm	0.0035	0.35	39650.0000	1.0100 (ppm)
Fe (238.204 nm)	1.0320	ppm	0.0063	0.61	2548.0000	1.0320 (ppm)
K (766.491 nm)	9.9850	ppm	0.0463	0.46	10060.0000	9.9850 (ppm)
Li (670.783 nm)	1.0010	ppm	0.0009	0.09	56990.0000	1.0010 (ppm)
Mg (279.078 nm)	5.0770	ppm	0.0509	1.00	13720.0000	5.0770 (ppm)
Mn (259.372 nm)	1.0060	ppm	0.0012	0.12	93540.0000	1.0060 (ppm)
Mo (204.598 nm)	1.0040	ppm	0.0016	0.16	3868.0000	1.0040 (ppm)
Na (589.592 nm)	9.9270	ppm	0.0087	0.09	53310.0000	9.9270 (ppm)
Ni (231.604 nm)	1.0080	ppm	0.0010	0.10	4409.0000	1.0080 (ppm)
P (213.618 nm)	1.0100	ppm	0.0054	0.54	713.2000	1.0100 (ppm)
Pb (220.353 nm)	1.0060	ppm	0.0004	0.03	1995.0000	1.0060 (ppm)
Sb (206.834 nm)	1.0040	ppm	0.0170	1.69	880.1000	1.0040 (ppm)
Se (196.026 nm)	1.0040	ppm	0.0088	0.88	618.2000	1.0040 (ppm)
Si (251.611 nm)	5.0330	ppm	0.0571	1.13	10650.0000	5.0330 (ppm)
Sn (189.925 nm)	1.0070	ppm	0.0028	0.28	580.6000	1.0070 (ppm)
Sr (421.552 nm)	1.0020	ppm	0.0019	0.19	346600.0000	1.0020 (ppm)
Ti (336.122 nm)	1.0210	ppm	0.0053	0.52	102300.0000	1.0210 (ppm)
Tl (190.794 nm)	1.0040	ppm	0.0112	1.11	1086.0000	1.0040 (ppm)
V (292.401 nm)	1.0070	ppm	0.0024	0.24	30600.0000	1.0070 (ppm)
W (207.912 nm)	1.0070	ppm	0.0024	0.24	1645.0000	1.0070 (ppm)
Zn (202.548 nm)	1.0110	ppm	0.0013	0.13	15670.0000	1.0110 (ppm)
Zr (343.823 nm)	1.0720	ppm	0.0020	0.18	87520.0000	1.0720 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9630	364500.0000	0.0007	0.07
Y_R 371.029	0.9724	49320.0000	0.0067	0.69

Sample Name: CCB 6043772

Date: 1/15/2020 4:38:51 PM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0002 u	ppm	0.0003	> 100.00	39.3800	-0.0002 u (ppm)
Al (396.152 nm)	0.0008	ppm	0.0006	69.49	-299.7000	0.0008 (ppm)
As (188.980 nm)	0.0046	ppm	0.0015	33.12	1.4960	0.0046 (ppm)
B (249.678 nm)	0.0011	ppm	0.0003	24.67	-1.1190	0.0011 (ppm)
Ba (233.527 nm)	0.0002	ppm	0.0000	4.49	76.7700	0.0002 (ppm)
Be (234.861 nm)	0.0001	ppm	0.0001	75.33	34.4700	0.0001 (ppm)
Ca (422.673 nm)	0.0152	ppm	0.0041	27.08	139.4000	0.0152 (ppm)
Cd (214.439 nm)	0.0002 u	ppm	0.0003	> 100.00	-2.6890	0.0002 u (ppm)
Co (228.615 nm)	-0.0003 u	ppm	0.0004	> 100.00	-13.0600	-0.0003 u (ppm)
Cr (205.560 nm)	-0.0004 u	ppm	0.0007	> 100.00	-1.1780	-0.0004 u (ppm)
Cu (324.754 nm)	0.0005	ppm	0.0003	68.47	152.5000	0.0005 (ppm)
Fe (238.204 nm)	0.0018	ppm	0.0017	92.21	-50.9500	0.0018 (ppm)
K (766.491 nm)	-0.0967 u	ppm	0.0691	71.47	-224.3000	-0.0967 u (ppm)
Li (670.783 nm)	-0.0004 u	ppm	0.0015	> 100.00	103.2000	-0.0004 u (ppm)
Mg (279.078 nm)	0.0032	ppm	0.0021	65.69	22.9300	0.0032 (ppm)
Mn (259.372 nm)	0.0002	ppm	0.0000	3.30	64.3700	0.0002 (ppm)
Mo (204.598 nm)	0.0017	ppm	0.0008	45.20	4.9810	0.0017 (ppm)
Na (589.592 nm)	-0.0782 u	ppm	0.0101	12.95	488.6000	-0.0782 u (ppm)
Ni (231.604 nm)	0.0011	ppm	0.0014	> 100.00	-7.1440	0.0011 (ppm)
P (213.618 nm)	-0.0070 u	ppm	0.0022	31.21	-1.2000	-0.0070 u (ppm)
Pb (220.353 nm)	-0.0002 u	ppm	0.0012	> 100.00	8.3590	-0.0002 u (ppm)
Sb (206.834 nm)	0.0017	ppm	0.0003	15.58	4.0840	0.0017 (ppm)
Se (196.026 nm)	0.0032	ppm	0.0039	> 100.00	3.4350	0.0032 (ppm)
Si (251.611 nm)	0.0020 u	ppm	0.0030	> 100.00	3.5220	0.0020 u (ppm)
Sn (189.925 nm)	-0.0043 u	ppm	0.0020	47.48	-2.8260	-0.0043 u (ppm)
Sr (421.552 nm)	0.0000	ppm	0.0000	88.63	-30.7600	0.0000 (ppm)
Ti (336.122 nm)	0.0013	ppm	0.0004	31.57	-26.0800	0.0013 (ppm)
Tl (190.794 nm)	0.0000 u	ppm	0.0024	> 100.00	5.5470	0.0000 u (ppm)
V (292.401 nm)	0.0003 u	ppm	0.0004	> 100.00	83.6000	0.0003 u (ppm)
W (207.912 nm)	0.0028	ppm	0.0002	8.24	-1.3130	0.0028 (ppm)
Zn (202.548 nm)	0.0004	ppm	0.0001	34.04	14.7100	0.0004 (ppm)
Zr (343.823 nm)	0.0004	ppm	0.0001	17.80	844.4000	0.0004 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9745	368800.0000	0.0053	0.54
Y_R 371.029	0.9791	49660.0000	0.0046	0.47

Sample Name: 440-258875-B-9-A@5

Date: 1/15/2020 4:47:41 PM

Rack:Tube: 1:50

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0011 u	ppm	0.0006	54.91	-179.2000	-0.0011 u (ppm)
Al (396.152 nm)	67.3600	ppm	0.0547	0.08	2041000.0000	67.3600 (ppm)
As (188.980 nm)	0.0388	ppm	0.0008	2.11	16.0400	0.0388 (ppm)
B (249.678 nm)	0.0342	ppm	0.0002	0.61	226.1000	0.0342 (ppm)
Ba (233.527 nm)	0.8064	ppm	0.0030	0.37	68980.0000	0.8064 (ppm)
Be (234.861 nm)	0.0033	ppm	0.0001	2.56	2181.0000	0.0033 (ppm)
Ca (422.673 nm)	50.3100	ppm	0.2429	0.48	196200.0000	50.3100 (ppm)
Cd (214.439 nm)	0.0003 u	ppm	0.0004	> 100.00	17.1000	0.0003 u (ppm)
Co (228.615 nm)	0.0321	ppm	0.0011	3.54	472.8000	0.0321 (ppm)
Cr (205.560 nm)	0.0675	ppm	0.0007	1.08	303.5000	0.0675 (ppm)
Cu (324.754 nm)	0.3861	ppm	0.0005	0.14	15260.0000	0.3861 (ppm)
Fe (238.204 nm)	107.5000	ppm	0.5015	0.47	271200.0000	107.5000 (ppm)
K (766.491 nm)	11.4400	ppm	0.0594	0.52	11570.0000	11.4400 (ppm)
Li (670.783 nm)	0.0596	ppm	0.0028	4.65	3188.0000	0.0596 (ppm)
Mg (279.078 nm)	24.5000	ppm	0.1140	0.47	66100.0000	24.5000 (ppm)
Mn (259.372 nm)	2.2110	ppm	0.0022	0.10	216200.0000	2.2110 (ppm)
Mo (204.598 nm)	0.0093	ppm	0.0015	15.66	42.8100	0.0093 (ppm)
Na (589.592 nm)	4.5370	ppm	0.0563	1.24	25700.0000	4.5370 (ppm)
Ni (231.604 nm)	0.0367	ppm	0.0001	0.18	142.7000	0.0367 (ppm)
P (213.618 nm)	3.1500	ppm	0.0026	0.08	2347.0000	3.1500 (ppm)
Pb (220.353 nm)	0.0517	ppm	0.0026	5.00	62.3300	0.0517 (ppm)
Sb (206.834 nm)	0.0013 u	ppm	0.0068	> 100.00	5.0850	0.0013 u (ppm)
Se (196.026 nm)	0.0051 u	ppm	0.0079	> 100.00	-19.3900	0.0051 u (ppm)
Si (251.611 nm)	0.7999	ppm	0.0078	0.98	1687.0000	0.7999 (ppm)
Sn (189.925 nm)	0.0059	ppm	0.0048	82.24	3.0360	0.0059 (ppm)
Sr (421.552 nm)	0.5523	ppm	0.0030	0.54	191500.0000	0.5523 (ppm)
Ti (336.122 nm)	2.4040	ppm	0.0020	0.08	241100.0000	2.4040 (ppm)
Tl (190.794 nm)	-0.0293 u	ppm	0.0010	3.24	-49.2900	-0.0293 u (ppm)
V (292.401 nm)	0.2509	ppm	0.0002	0.08	7857.0000	0.2509 (ppm)
W (207.912 nm)	0.0028	ppm	0.0023	79.84	-0.8622	0.0028 (ppm)
Zn (202.548 nm)	0.2097	ppm	0.0006	0.29	3232.0000	0.2097 (ppm)
Zr (343.823 nm)	0.0549	ppm	0.0016	2.92	3088.0000	0.0549 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9490	359200.0000	0.0027	0.28
Y_R 371.029	0.9672	49060.0000	0.0071	0.74

Sample Name: 440-258875-B-11-A@5

Date: 1/15/2020 4:49:51 PM

Rack:Tube: 1:51

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0014 u	ppm	0.0003	21.79	-205.9000	-0.0014 u (ppm)
Al (396.152 nm)	68.5900	ppm	0.2188	0.32	2079000.0000	68.5900 (ppm)
As (188.980 nm)	0.0430	ppm	0.0023	5.36	18.0500	0.0430 (ppm)
B (249.678 nm)	0.0359	ppm	0.0000	0.09	233.5000	0.0359 (ppm)
Ba (233.527 nm)	0.7329	ppm	0.0029	0.39	62690.0000	0.7329 (ppm)
Be (234.861 nm)	0.0031	ppm	0.0001	3.09	2291.0000	0.0031 (ppm)
Ca (422.673 nm)	41.4400	ppm	0.1743	0.42	161600.0000	41.4400 (ppm)
Cd (214.439 nm)	0.0004	ppm	0.0000	5.30	21.9500	0.0004 (ppm)
Co (228.615 nm)	0.0324	ppm	0.0003	1.02	486.8000	0.0324 (ppm)
Cr (205.560 nm)	0.0762	ppm	0.0002	0.22	342.3000	0.0762 (ppm)
Cu (324.754 nm)	0.5104	ppm	0.0013	0.25	20130.0000	0.5104 (ppm)
Fe (238.204 nm)	116.7000	ppm	0.2545	0.22	294500.0000	116.7000 (ppm)
K (766.491 nm)	11.1600	ppm	0.0280	0.25	11290.0000	11.1600 (ppm)
Li (670.783 nm)	0.0598	ppm	0.0006	0.99	3143.0000	0.0598 (ppm)
Mg (279.078 nm)	25.0000	ppm	0.1234	0.49	67450.0000	25.0000 (ppm)
Mn (259.372 nm)	2.2710	ppm	0.0047	0.21	222800.0000	2.2710 (ppm)
Mo (204.598 nm)	0.0116	ppm	0.0007	6.25	52.0200	0.0116 (ppm)
Na (589.592 nm)	4.5030	ppm	0.0289	0.64	25590.0000	4.5030 (ppm)
Ni (231.604 nm)	0.0423	ppm	0.0000	0.10	167.2000	0.0423 (ppm)
P (213.618 nm)	3.2340	ppm	0.0005	0.02	2406.0000	3.2340 (ppm)
Pb (220.353 nm)	0.0532	ppm	0.0010	1.80	61.1500	0.0532 (ppm)
Sb (206.834 nm)	0.0052 u	ppm	0.0140	> 100.00	8.6650	0.0052 u (ppm)
Se (196.026 nm)	0.0071	ppm	0.0061	85.71	-20.2100	0.0071 (ppm)
Si (251.611 nm)	0.9293	ppm	0.0039	0.42	1959.0000	0.9293 (ppm)
Sn (189.925 nm)	0.0015	ppm	0.0019	> 100.00	0.4723	0.0015 (ppm)
Sr (421.552 nm)	0.4584	ppm	0.0010	0.23	158900.0000	0.4584 (ppm)
Ti (336.122 nm)	2.8430	ppm	0.0065	0.23	285200.0000	2.8430 (ppm)
Tl (190.794 nm)	-0.0287 u	ppm	0.0039	13.72	-53.1400	-0.0287 u (ppm)
V (292.401 nm)	0.2574	ppm	0.0005	0.20	8055.0000	0.2574 (ppm)
W (207.912 nm)	0.0038	ppm	0.0037	96.63	0.9303	0.0038 (ppm)
Zn (202.548 nm)	0.2163	ppm	0.0004	0.18	3347.0000	0.2163 (ppm)
Zr (343.823 nm)	0.0684	ppm	0.0021	3.10	3995.0000	0.0684 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9519	360300.0000	0.0004	0.04
Y_R 371.029	0.9657	48980.0000	0.0064	0.66

Sample Name: 440-258875-B-12-A@5

Date: 1/15/2020 4:52:03 PM

Rack:Tube: 1:52

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0012 u	ppm	0.0001	10.53	-199.5000	-0.0012 u (ppm)
Al (396.152 nm)	66.9900	ppm	0.1375	0.21	2030000.0000	66.9900 (ppm)
As (188.980 nm)	0.0389	ppm	0.0006	1.50	15.5200	0.0389 (ppm)
B (249.678 nm)	0.0348	ppm	0.0007	2.04	221.3000	0.0348 (ppm)
Ba (233.527 nm)	0.7423	ppm	0.0029	0.39	63500.0000	0.7423 (ppm)
Be (234.861 nm)	0.0032	ppm	0.0001	2.48	2303.0000	0.0032 (ppm)
Ca (422.673 nm)	38.6200	ppm	0.0958	0.25	150600.0000	38.6200 (ppm)
Cd (214.439 nm)	0.0002	ppm	0.0001	55.96	16.2800	0.0002 (ppm)
Co (228.615 nm)	0.0325	ppm	0.0002	0.46	489.5000	0.0325 (ppm)
Cr (205.560 nm)	0.0822	ppm	0.0002	0.23	369.0000	0.0822 (ppm)
Cu (324.754 nm)	0.3513	ppm	0.0006	0.17	13910.0000	0.3513 (ppm)
Fe (238.204 nm)	116.6000	ppm	0.4892	0.42	294200.0000	116.6000 (ppm)
K (766.491 nm)	11.2700	ppm	0.0027	0.02	11410.0000	11.2700 (ppm)
Li (670.783 nm)	0.0579	ppm	0.0007	1.21	3026.0000	0.0579 (ppm)
Mg (279.078 nm)	23.0300	ppm	0.0677	0.29	62110.0000	23.0300 (ppm)
Mn (259.372 nm)	2.3950	ppm	0.0038	0.16	234100.0000	2.3950 (ppm)
Mo (204.598 nm)	0.0082	ppm	0.0009	10.77	38.5100	0.0082 (ppm)
Na (589.592 nm)	4.4200	ppm	0.0025	0.06	25150.0000	4.4200 (ppm)
Ni (231.604 nm)	0.0367	ppm	0.0001	0.25	142.7000	0.0367 (ppm)
P (213.618 nm)	3.3470	ppm	0.0218	0.65	2495.0000	3.3470 (ppm)
Pb (220.353 nm)	0.0543	ppm	0.0026	4.72	63.4500	0.0543 (ppm)
Sb (206.834 nm)	0.0016 u	ppm	0.0067	> 100.00	5.5380	0.0016 u (ppm)
Se (196.026 nm)	0.0127	ppm	0.0074	57.92	-16.7000	0.0127 (ppm)
Si (251.611 nm)	0.9506	ppm	0.0044	0.47	2004.0000	0.9506 (ppm)
Sn (189.925 nm)	0.0016 u	ppm	0.0054	> 100.00	0.5806	0.0016 u (ppm)
Sr (421.552 nm)	0.4792	ppm	0.0016	0.33	166100.0000	0.4792 (ppm)
Ti (336.122 nm)	2.8930	ppm	0.0048	0.17	290300.0000	2.8930 (ppm)
Tl (190.794 nm)	-0.0330 u	ppm	0.0038	11.53	-58.4000	-0.0330 u (ppm)
V (292.401 nm)	0.2608	ppm	0.0014	0.53	8158.0000	0.2608 (ppm)
W (207.912 nm)	0.0021 u	ppm	0.0039	> 100.00	-1.9250	0.0021 u (ppm)
Zn (202.548 nm)	0.2159	ppm	0.0007	0.32	3322.0000	0.2159 (ppm)
Zr (343.823 nm)	0.0751	ppm	0.0020	2.65	4535.0000	0.0751 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9520	360300.0000	0.0017	0.18
Y_R 371.029	0.9619	48790.0000	0.0035	0.36

Sample Name: 440-258875-B-13-A@5

Date: 1/15/2020 4:54:15 PM

Rack:Tube: 1:53

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0017 u	ppm	0.0002	13.18	-225.8000	-0.0017 u (ppm)
Al (396.152 nm)	70.3200	ppm	0.0163	0.02	2131000.0000	70.3200 (ppm)
As (188.980 nm)	0.0597	ppm	0.0088	14.74	27.9600	0.0597 (ppm)
B (249.678 nm)	0.0357	ppm	0.0003	0.71	227.1000	0.0357 (ppm)
Ba (233.527 nm)	0.7240	ppm	0.0029	0.40	61940.0000	0.7240 (ppm)
Be (234.861 nm)	0.0033	ppm	0.0000	0.79	2372.0000	0.0033 (ppm)
Ca (422.673 nm)	42.3400	ppm	0.1962	0.46	165200.0000	42.3400 (ppm)
Cd (214.439 nm)	0.0003	ppm	0.0001	19.16	20.4400	0.0003 (ppm)
Co (228.615 nm)	0.0322	ppm	0.0000	0.12	491.7000	0.0322 (ppm)
Cr (205.560 nm)	0.0862	ppm	0.0009	1.04	386.8000	0.0862 (ppm)
Cu (324.754 nm)	0.3072	ppm	0.0008	0.25	12190.0000	0.3072 (ppm)
Fe (238.204 nm)	120.0000	ppm	0.0323	0.03	302800.0000	120.0000 (ppm)
K (766.491 nm)	11.3900	ppm	0.0683	0.60	11520.0000	11.3900 (ppm)
Li (670.783 nm)	0.0628	ppm	0.0000	0.08	3313.0000	0.0628 (ppm)
Mg (279.078 nm)	23.4100	ppm	0.0934	0.40	63140.0000	23.4100 (ppm)
Mn (259.372 nm)	2.3150	ppm	0.0038	0.16	227200.0000	2.3150 (ppm)
Mo (204.598 nm)	0.0080	ppm	0.0007	8.42	38.3000	0.0080 (ppm)
Na (589.592 nm)	4.5900	ppm	0.0206	0.45	26070.0000	4.5900 (ppm)
Ni (231.604 nm)	0.0368	ppm	0.0003	0.89	142.9000	0.0368 (ppm)
P (213.618 nm)	3.2270	ppm	0.0331	1.03	2407.0000	3.2270 (ppm)
Pb (220.353 nm)	0.0573	ppm	0.0002	0.36	67.6000	0.0573 (ppm)
Sb (206.834 nm)	0.0000 u	ppm	0.0032	> 100.00	4.3140	0.0000 u (ppm)
Se (196.026 nm)	0.0096	ppm	0.0014	14.66	-19.4500	0.0096 (ppm)
Si (251.611 nm)	0.9970	ppm	0.0050	0.50	2102.0000	0.9970 (ppm)
Sn (189.925 nm)	0.0015 u	ppm	0.0058	> 100.00	0.5069	0.0015 u (ppm)
Sr (421.552 nm)	0.4615	ppm	0.0022	0.48	160000.0000	0.4615 (ppm)
Ti (336.122 nm)	3.1250	ppm	0.0013	0.04	313600.0000	3.1250 (ppm)
Tl (190.794 nm)	-0.0353 u	ppm	0.0010	2.73	-64.0100	-0.0353 u (ppm)
V (292.401 nm)	0.2794	ppm	0.0005	0.19	8735.0000	0.2794 (ppm)
W (207.912 nm)	0.0044	ppm	0.0013	30.27	2.0050	0.0044 (ppm)
Zn (202.548 nm)	0.2326	ppm	0.0003	0.12	3571.0000	0.2326 (ppm)
Zr (343.823 nm)	0.0851	ppm	0.0018	2.09	5280.0000	0.0851 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9515	360100.0000	0.0032	0.34
Y_R 371.029	0.9731	49360.0000	0.0012	0.13

Sample Name: 440-258875-B-14-A@5

Date: 1/15/2020 4:56:27 PM

Rack:Tube: 1:54

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0014 u	ppm	0.0002	10.62	-191.3000	-0.0014 u (ppm)
Al (396.152 nm)	64.6300	ppm	0.0039	0.01	1958000.0000	64.6300 (ppm)
As (188.980 nm)	0.0472	ppm	0.0052	11.08	21.0500	0.0472 (ppm)
B (249.678 nm)	0.0333	ppm	0.0006	1.74	214.0000	0.0333 (ppm)
Ba (233.527 nm)	0.7691	ppm	0.0054	0.70	65780.0000	0.7691 (ppm)
Be (234.861 nm)	0.0035	ppm	0.0001	1.55	2224.0000	0.0035 (ppm)
Ca (422.673 nm)	35.7300	ppm	0.1464	0.41	139400.0000	35.7300 (ppm)
Cd (214.439 nm)	0.0001 u	ppm	0.0004	> 100.00	14.2900	0.0001 u (ppm)
Co (228.615 nm)	0.0316	ppm	0.0014	4.52	478.3000	0.0316 (ppm)
Cr (205.560 nm)	0.0694	ppm	0.0000	0.07	312.2000	0.0694 (ppm)
Cu (324.754 nm)	0.2643	ppm	0.0002	0.09	10510.0000	0.2643 (ppm)
Fe (238.204 nm)	108.7000	ppm	0.4770	0.44	274200.0000	108.7000 (ppm)
K (766.491 nm)	10.8700	ppm	0.0826	0.76	10990.0000	10.8700 (ppm)
Li (670.783 nm)	0.0603	ppm	0.0016	2.71	3198.0000	0.0603 (ppm)
Mg (279.078 nm)	22.5200	ppm	0.1378	0.61	60760.0000	22.5200 (ppm)
Mn (259.372 nm)	2.5540	ppm	0.0039	0.15	248000.0000	2.5540 (ppm)
Mo (204.598 nm)	0.0053	ppm	0.0008	14.82	27.3500	0.0053 (ppm)
Na (589.592 nm)	4.6240	ppm	0.0107	0.23	26160.0000	4.6240 (ppm)
Ni (231.604 nm)	0.0378	ppm	0.0013	3.39	147.7000	0.0378 (ppm)
P (213.618 nm)	3.1690	ppm	0.0065	0.21	2364.0000	3.1690 (ppm)
Pb (220.353 nm)	0.0548	ppm	0.0009	1.59	67.8900	0.0548 (ppm)
Sb (206.834 nm)	0.0046	ppm	0.0044	96.03	8.1210	0.0046 (ppm)
Se (196.026 nm)	0.0099	ppm	0.0009	8.91	-16.5500	0.0099 (ppm)
Si (251.611 nm)	1.0240	ppm	0.0030	0.30	2158.0000	1.0240 (ppm)
Sn (189.925 nm)	0.0026 u	ppm	0.0042	> 100.00	1.1030	0.0026 u (ppm)
Sr (421.552 nm)	0.4901	ppm	0.0020	0.40	169900.0000	0.4901 (ppm)
Ti (336.122 nm)	2.9430	ppm	0.0018	0.06	295300.0000	2.9430 (ppm)
Tl (190.794 nm)	-0.0316 u	ppm	0.0021	6.49	-57.9600	-0.0316 u (ppm)
V (292.401 nm)	0.2641	ppm	0.0003	0.10	8258.0000	0.2641 (ppm)
W (207.912 nm)	0.0066	ppm	0.0002	3.51	5.4820	0.0066 (ppm)
Zn (202.548 nm)	0.2128	ppm	0.0002	0.11	3269.0000	0.2128 (ppm)
Zr (343.823 nm)	0.0871	ppm	0.0012	1.37	5666.0000	0.0871 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9523	360400.0000	0.0001	0.01
Y_R 371.029	0.9693	49160.0000	0.0047	0.49

Sample Name: 440-258875-B-15-A@5

Date: 1/15/2020 4:58:39 PM

Rack:Tube: 1:55

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0016 u	ppm	0.0004	24.72	-196.6000	-0.0016 u (ppm)
Al (396.152 nm)	64.9800	ppm	0.1300	0.20	1969000.0000	64.9800 (ppm)
As (188.980 nm)	0.0541	ppm	0.0042	7.77	25.4000	0.0541 (ppm)
B (249.678 nm)	0.0323	ppm	0.0019	6.03	205.9000	0.0323 (ppm)
Ba (233.527 nm)	1.2440	ppm	0.0002	0.02	106300.0000	1.2440 (ppm)
Be (234.861 nm)	0.0035	ppm	0.0001	1.77	2209.0000	0.0035 (ppm)
Ca (422.673 nm)	40.1000	ppm	0.0279	0.07	156400.0000	40.1000 (ppm)
Cd (214.439 nm)	0.0002	ppm	0.0002	76.73	15.3400	0.0002 (ppm)
Co (228.615 nm)	0.0291	ppm	0.0011	3.77	433.9000	0.0291 (ppm)
Cr (205.560 nm)	0.0629	ppm	0.0005	0.79	283.0000	0.0629 (ppm)
Cu (324.754 nm)	0.2892	ppm	0.0004	0.14	11480.0000	0.2892 (ppm)
Fe (238.204 nm)	107.5000	ppm	0.1715	0.16	271200.0000	107.5000 (ppm)
K (766.491 nm)	11.0300	ppm	0.0699	0.63	11150.0000	11.0300 (ppm)
Li (670.783 nm)	0.0575	ppm	0.0007	1.17	3054.0000	0.0575 (ppm)
Mg (279.078 nm)	23.4600	ppm	0.0212	0.09	63290.0000	23.4600 (ppm)
Mn (259.372 nm)	2.2350	ppm	0.0092	0.41	218400.0000	2.2350 (ppm)
Mo (204.598 nm)	0.0040	ppm	0.0012	30.02	22.2000	0.0040 (ppm)
Na (589.592 nm)	5.5860	ppm	0.0065	0.12	31220.0000	5.5860 (ppm)
Ni (231.604 nm)	0.0376	ppm	0.0013	3.45	147.1000	0.0376 (ppm)
P (213.618 nm)	3.2030	ppm	0.0275	0.86	2389.0000	3.2030 (ppm)
Pb (220.353 nm)	0.0504	ppm	0.0005	1.01	59.8800	0.0504 (ppm)
Sb (206.834 nm)	-0.0053 u	ppm	0.0007	13.88	-0.6817	-0.0053 u (ppm)
Se (196.026 nm)	0.0114	ppm	0.0024	21.25	-15.5400	0.0114 (ppm)
Si (251.611 nm)	0.7978	ppm	0.0032	0.40	1682.0000	0.7978 (ppm)
Sn (189.925 nm)	0.0016	ppm	0.0012	73.20	0.5850	0.0016 (ppm)
Sr (421.552 nm)	0.6552	ppm	0.0004	0.06	227000.0000	0.6552 (ppm)
Ti (336.122 nm)	2.4360	ppm	0.0056	0.23	244400.0000	2.4360 (ppm)
Tl (190.794 nm)	-0.0265 u	ppm	0.0032	12.10	-46.6500	-0.0265 u (ppm)
V (292.401 nm)	0.2584	ppm	0.0004	0.15	8074.0000	0.2584 (ppm)
W (207.912 nm)	0.0011	ppm	0.0007	65.07	-3.3670	0.0011 (ppm)
Zn (202.548 nm)	0.2147	ppm	0.0008	0.37	3300.0000	0.2147 (ppm)
Zr (343.823 nm)	0.0815	ppm	0.0003	0.42	5239.0000	0.0815 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9502	359700.0000	0.0002	0.03
Y_R 371.029	0.9661	49010.0000	0.0039	0.40

Sample Name: 440-258875-B-16-A@5

Date: 1/15/2020 5:00:51 PM

Rack:Tube: 1:56

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0014 u	ppm	0.0006	42.70	-185.6000	-0.0014 u (ppm)
Al (396.152 nm)	62.7700	ppm	0.0326	0.05	1902000.0000	62.7700 (ppm)
As (188.980 nm)	0.0465	ppm	0.0012	2.50	20.8700	0.0465 (ppm)
B (249.678 nm)	0.0367	ppm	0.0007	1.93	255.1000	0.0367 (ppm)
Ba (233.527 nm)	0.7081	ppm	0.0002	0.03	60580.0000	0.7081 (ppm)
Be (234.861 nm)	0.0033	ppm	0.0000	0.03	2146.0000	0.0033 (ppm)
Ca (422.673 nm)	45.5100	ppm	0.0640	0.14	177500.0000	45.5100 (ppm)
Cd (214.439 nm)	0.0001 u	ppm	0.0002	> 100.00	12.9300	0.0001 u (ppm)
Co (228.615 nm)	0.0322	ppm	0.0001	0.24	469.1000	0.0322 (ppm)
Cr (205.560 nm)	0.0646	ppm	0.0007	1.14	290.8000	0.0646 (ppm)
Cu (324.754 nm)	0.3598	ppm	0.0001	0.03	14230.0000	0.3598 (ppm)
Fe (238.204 nm)	105.5000	ppm	0.2667	0.25	266300.0000	105.5000 (ppm)
K (766.491 nm)	10.7700	ppm	0.0164	0.15	10890.0000	10.7700 (ppm)
Li (670.783 nm)	0.0605	ppm	0.0007	1.21	3232.0000	0.0605 (ppm)
Mg (279.078 nm)	24.0100	ppm	0.0428	0.18	64770.0000	24.0100 (ppm)
Mn (259.372 nm)	2.1820	ppm	0.0007	0.03	213200.0000	2.1820 (ppm)
Mo (204.598 nm)	0.0049	ppm	0.0002	3.26	25.2100	0.0049 (ppm)
Na (589.592 nm)	5.5020	ppm	0.0270	0.49	30770.0000	5.5020 (ppm)
Ni (231.604 nm)	0.0363	ppm	0.0007	1.97	141.1000	0.0363 (ppm)
P (213.618 nm)	3.4560	ppm	0.0165	0.48	2576.0000	3.4560 (ppm)
Pb (220.353 nm)	0.0512	ppm	0.0001	0.21	62.7300	0.0512 (ppm)
Sb (206.834 nm)	0.0011	ppm	0.0010	89.18	4.9140	0.0011 (ppm)
Se (196.026 nm)	0.0147	ppm	0.0097	66.25	-13.0300	0.0147 (ppm)
Si (251.611 nm)	0.9835	ppm	0.0079	0.80	2068.0000	0.9835 (ppm)
Sn (189.925 nm)	0.0041	ppm	0.0047	> 100.00	2.0200	0.0041 (ppm)
Sr (421.552 nm)	0.4354	ppm	0.0005	0.11	151000.0000	0.4354 (ppm)
Ti (336.122 nm)	2.2290	ppm	0.0015	0.07	223600.0000	2.2290 (ppm)
Tl (190.794 nm)	-0.0257 u	ppm	0.0036	14.07	-43.4500	-0.0257 u (ppm)
V (292.401 nm)	0.2550	ppm	0.0003	0.10	7970.0000	0.2550 (ppm)
W (207.912 nm)	0.0012	ppm	0.0014	> 100.00	-3.4560	0.0012 (ppm)
Zn (202.548 nm)	0.2059	ppm	0.0005	0.23	3173.0000	0.2059 (ppm)
Zr (343.823 nm)	0.0883	ppm	0.0000	0.00	5833.0000	0.0883 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9495	359400.0000	0.0004	0.05
Y_R 371.029	0.9659	48990.0000	0.0020	0.21

Sample Name: 440-258875-B-17-A@5

Date: 1/15/2020 5:03:03 PM

Rack:Tube: 1:57

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0015 u	ppm	0.0003	21.30	-207.0000	-0.0015 u (ppm)
Al (396.152 nm)	68.1600	ppm	0.0126	0.02	2066000.0000	68.1600 (ppm)
As (188.980 nm)	0.0560	ppm	0.0015	2.60	26.0900	0.0560 (ppm)
B (249.678 nm)	0.0581	ppm	0.0006	1.02	471.8000	0.0581 (ppm)
Ba (233.527 nm)	0.8568	ppm	0.0019	0.22	73280.0000	0.8568 (ppm)
Be (234.861 nm)	0.0028	ppm	0.0000	1.62	2211.0000	0.0028 (ppm)
Ca (422.673 nm)	55.1700	ppm	0.0435	0.08	215200.0000	55.1700 (ppm)
Cd (214.439 nm)	-0.0001 u	ppm	0.0001	> 100.00	10.7700	-0.0001 u (ppm)
Co (228.615 nm)	0.0442	ppm	0.0004	0.88	639.3000	0.0442 (ppm)
Cr (205.560 nm)	0.0675	ppm	0.0006	0.89	303.8000	0.0675 (ppm)
Cu (324.754 nm)	0.6338	ppm	0.0000	0.01	24950.0000	0.6338 (ppm)
Fe (238.204 nm)	115.0000	ppm	0.2824	0.25	290200.0000	115.0000 (ppm)
K (766.491 nm)	11.7400	ppm	0.0103	0.09	11880.0000	11.7400 (ppm)
Li (670.783 nm)	0.0721	ppm	0.0019	2.68	3853.0000	0.0721 (ppm)
Mg (279.078 nm)	26.4300	ppm	0.0638	0.24	71290.0000	26.4300 (ppm)
Mn (259.372 nm)	2.7200	ppm	0.0033	0.12	264000.0000	2.7200 (ppm)
Mo (204.598 nm)	0.0083	ppm	0.0006	7.51	39.0200	0.0083 (ppm)
Na (589.592 nm)	7.3690	ppm	0.0173	0.23	40690.0000	7.3690 (ppm)
Ni (231.604 nm)	0.0415	ppm	0.0008	1.82	163.2000	0.0415 (ppm)
P (213.618 nm)	4.2330	ppm	0.0129	0.30	3148.0000	4.2330 (ppm)
Pb (220.353 nm)	0.0561	ppm	0.0014	2.54	68.0300	0.0561 (ppm)
Sb (206.834 nm)	0.0039 u	ppm	0.0097	> 100.00	7.5220	0.0039 u (ppm)
Se (196.026 nm)	0.0027 u	ppm	0.0064	> 100.00	-22.4200	0.0027 u (ppm)
Si (251.611 nm)	0.8953	ppm	0.0000	0.01	1890.0000	0.8953 (ppm)
Sn (189.925 nm)	-0.0005 u	ppm	0.0069	> 100.00	-0.6073	-0.0005 u (ppm)
Sr (421.552 nm)	0.6502	ppm	0.0013	0.20	225400.0000	0.6502 (ppm)
Ti (336.122 nm)	2.8430	ppm	0.0019	0.07	285200.0000	2.8430 (ppm)
Tl (190.794 nm)	-0.0275 u	ppm	0.0072	26.07	-51.7000	-0.0275 u (ppm)
V (292.401 nm)	0.2743	ppm	0.0001	0.04	8588.0000	0.2743 (ppm)
W (207.912 nm)	0.0072	ppm	0.0005	6.80	5.9450	0.0072 (ppm)
Zn (202.548 nm)	0.1961	ppm	0.0003	0.15	3048.0000	0.1961 (ppm)
Zr (343.823 nm)	0.0961	ppm	0.0008	0.85	6272.0000	0.0961 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9456	357900.0000	0.0003	0.03
Y_R 371.029	0.9605	48720.0000	0.0042	0.44

Sample Name: 440-258875-B-19-A@5

Date: 1/15/2020 5:05:16 PM

Rack:Tube: 1:58

Weight (g): 1

Volume (mL): 1

Dilution: 1

**Analyte Results**

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0010 u	ppm	0.0001	11.86	-179.5000	-0.0010 u (ppm)
Al (396.152 nm)	63.1600	ppm	0.3206	0.51	1914000.0000	63.1600 (ppm)
As (188.980 nm)	0.0580	ppm	0.0056	9.67	27.5800	0.0580 (ppm)
B (249.678 nm)	0.0715	ppm	0.0013	1.82	623.0000	0.0715 (ppm)
Ba (233.527 nm)	0.5613	ppm	0.0034	0.61	48030.0000	0.5613 (ppm)
Be (234.861 nm)	0.0023	ppm	0.0001	3.71	2039.0000	0.0023 (ppm)
Ca (422.673 nm)	62.1800	ppm	0.0056	0.01	242500.0000	62.1800 (ppm)
Cd (214.439 nm)	0.0001 u	ppm	0.0003	> 100.00	14.3800	0.0001 u (ppm)
Co (228.615 nm)	0.0325	ppm	0.0005	1.59	494.8000	0.0325 (ppm)
Cr (205.560 nm)	0.0663	ppm	0.0004	0.59	298.4000	0.0663 (ppm)
Cu (324.754 nm)	0.7202	ppm	0.0011	0.15	28320.0000	0.7202 (ppm)
Fe (238.204 nm)	108.4000	ppm	0.0408	0.04	273700.0000	108.4000 (ppm)
K (766.491 nm)	10.1200	ppm	0.0045	0.04	10230.0000	10.1200 (ppm)
Li (670.783 nm)	0.0745	ppm	0.0002	0.32	4057.0000	0.0745 (ppm)
Mg (279.078 nm)	27.2700	ppm	0.1570	0.58	73590.0000	27.2700 (ppm)
Mn (259.372 nm)	1.6920	ppm	0.0069	0.41	168400.0000	1.6920 (ppm)
Mo (204.598 nm)	0.0058	ppm	0.0005	8.82	29.0000	0.0058 (ppm)
Na (589.592 nm)	6.7630	ppm	0.0280	0.41	37440.0000	6.7630 (ppm)
Ni (231.604 nm)	0.0422	ppm	0.0004	0.99	166.8000	0.0422 (ppm)
P (213.618 nm)	4.1460	ppm	0.0295	0.71	3080.0000	4.1460 (ppm)
Pb (220.353 nm)	0.0410	ppm	0.0015	3.71	40.5100	0.0410 (ppm)
Sb (206.834 nm)	0.0005	ppm	0.0007	> 100.00	4.6680	0.0005 (ppm)
Se (196.026 nm)	0.0072	ppm	0.0005	6.38	-18.6400	0.0072 (ppm)
Si (251.611 nm)	0.8922	ppm	0.0045	0.51	1886.0000	0.8922 (ppm)
Sn (189.925 nm)	-0.0018 u	ppm	0.0079	> 100.00	-1.4250	-0.0018 u (ppm)
Sr (421.552 nm)	0.4823	ppm	0.0004	0.08	167400.0000	0.4823 (ppm)
Ti (336.122 nm)	3.1210	ppm	0.0105	0.34	313200.0000	3.1210 (ppm)
Tl (190.794 nm)	-0.0298 u	ppm	0.0025	8.34	-59.7200	-0.0298 u (ppm)
V (292.401 nm)	0.2704	ppm	0.0012	0.44	8486.0000	0.2704 (ppm)
W (207.912 nm)	0.0058	ppm	0.0003	4.34	3.3390	0.0058 (ppm)
Zn (202.548 nm)	0.1737	ppm	0.0004	0.25	2715.0000	0.1737 (ppm)
Zr (343.823 nm)	0.0938	ppm	0.0007	0.69	6219.0000	0.0938 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9426	356800.0000	0.0016	0.17
Y_R 371.029	0.9592	48650.0000	0.0003	0.03

Sample Name: 440-258875-B-20-A@5

Date: 1/15/2020 5:07:27 PM

Rack:Tube: 1:59

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0009 u	ppm	0.0003	29.93	-173.1000	-0.0009 u (ppm)
Al (396.152 nm)	60.6900	ppm	1.5280	2.52	1839000.0000	60.6900 (ppm)
As (188.980 nm)	0.0470	ppm	0.0000	0.08	20.9100	0.0470 (ppm)
B (249.678 nm)	0.0535	ppm	0.0024	4.51	431.8000	0.0535 (ppm)
Ba (233.527 nm)	0.5336	ppm	0.0015	0.28	45660.0000	0.5336 (ppm)
Be (234.861 nm)	0.0020	ppm	0.0002	11.96	1979.0000	0.0020 (ppm)
Ca (422.673 nm)	54.8100	ppm	0.1211	0.22	213800.0000	54.8100 (ppm)
Cd (214.439 nm)	0.0004	ppm	0.0002	63.64	19.5600	0.0004 (ppm)
Co (228.615 nm)	0.0322	ppm	0.0013	3.98	488.4000	0.0322 (ppm)
Cr (205.560 nm)	0.0740	ppm	0.0010	1.39	332.7000	0.0740 (ppm)
Cu (324.754 nm)	1.2000	ppm	0.0319	2.66	47100.0000	1.2000 (ppm)
Fe (238.204 nm)	107.8000	ppm	0.1515	0.14	271900.0000	107.8000 (ppm)
K (766.491 nm)	9.7940	ppm	0.0348	0.36	9899.0000	9.7940 (ppm)
Li (670.783 nm)	0.0674	ppm	0.0033	4.90	3611.0000	0.0674 (ppm)
Mg (279.078 nm)	27.0300	ppm	0.0947	0.35	72940.0000	27.0300 (ppm)
Mn (259.372 nm)	1.5360	ppm	0.0404	2.63	153900.0000	1.5360 (ppm)
Mo (204.598 nm)	0.0082	ppm	0.0005	5.64	37.8800	0.0082 (ppm)
Na (589.592 nm)	5.6890	ppm	0.0125	0.22	31770.0000	5.6890 (ppm)
Ni (231.604 nm)	0.0407	ppm	0.0012	3.05	160.6000	0.0407 (ppm)
P (213.618 nm)	4.0570	ppm	0.1390	3.43	3000.0000	4.0570 (ppm)
Pb (220.353 nm)	0.0389	ppm	0.0010	2.60	36.8500	0.0389 (ppm)
Sb (206.834 nm)	-0.0034 u	ppm	0.0024	72.25	1.2280	-0.0034 u (ppm)
Se (196.026 nm)	0.0083	ppm	0.0022	27.07	-17.8300	0.0083 (ppm)
Si (251.611 nm)	0.7932	ppm	0.0266	3.35	1679.0000	0.7932 (ppm)
Sn (189.925 nm)	-0.0006 u	ppm	0.0053	> 100.00	-0.7071	-0.0006 u (ppm)
Sr (421.552 nm)	0.4253	ppm	0.0005	0.13	147600.0000	0.4253 (ppm)
Ti (336.122 nm)	3.0120	ppm	0.0699	2.32	302200.0000	3.0120 (ppm)
Tl (190.794 nm)	-0.0298 u	ppm	0.0027	9.21	-58.1900	-0.0298 u (ppm)
V (292.401 nm)	0.2537	ppm	0.0064	2.52	7963.0000	0.2537 (ppm)
W (207.912 nm)	0.0064	ppm	0.0001	1.19	4.6260	0.0064 (ppm)
Zn (202.548 nm)	0.1816	ppm	0.0030	1.66	2896.0000	0.1816 (ppm)
Zr (343.823 nm)	0.0851	ppm	0.0004	0.49	5530.0000	0.0851 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9500	359600.0000	0.0166	1.75
Y_R 371.029	0.9702	49210.0000	0.0038	0.39

Sample Name: CCV 6043773

Date: 1/15/2020 5:19:06 PM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.4972	ppm	0.0002	0.05	20080.0000	0.4972 (ppm)
Al (396.152 nm)	0.9985	ppm	0.0012	0.12	31050.0000	0.9985 (ppm)
As (188.980 nm)	0.9960	ppm	0.0024	0.24	597.3000	0.9960 (ppm)
B (249.678 nm)	0.9964	ppm	0.0032	0.32	10530.0000	0.9964 (ppm)
Ba (233.527 nm)	1.0020	ppm	0.0120	1.20	85670.0000	1.0020 (ppm)
Be (234.861 nm)	0.9973	ppm	0.0002	0.02	156500.0000	0.9973 (ppm)
Ca (422.673 nm)	4.9570	ppm	0.0105	0.21	19410.0000	4.9570 (ppm)
Cd (214.439 nm)	0.9968	ppm	0.0004	0.04	21520.0000	0.9968 (ppm)
Co (228.615 nm)	0.9961	ppm	0.0009	0.09	12870.0000	0.9961 (ppm)
Cr (205.560 nm)	0.9955	ppm	0.0013	0.13	4419.0000	0.9955 (ppm)
Cu (324.754 nm)	1.0010	ppm	0.0026	0.26	39270.0000	1.0010 (ppm)
Fe (238.204 nm)	1.0210	ppm	0.0026	0.25	2521.0000	1.0210 (ppm)
K (766.491 nm)	9.9280	ppm	0.0466	0.47	10000.0000	9.9280 (ppm)
Li (670.783 nm)	0.9946	ppm	0.0049	0.50	56630.0000	0.9946 (ppm)
Mg (279.078 nm)	5.0460	ppm	0.0530	1.05	13630.0000	5.0460 (ppm)
Mn (259.372 nm)	0.9946	ppm	0.0005	0.05	92460.0000	0.9946 (ppm)
Mo (204.598 nm)	0.9877	ppm	0.0022	0.22	3804.0000	0.9877 (ppm)
Na (589.592 nm)	9.8680	ppm	0.0377	0.38	52990.0000	9.8680 (ppm)
Ni (231.604 nm)	0.9939	ppm	0.0035	0.36	4348.0000	0.9939 (ppm)
P (213.618 nm)	0.9974	ppm	0.0009	0.09	704.6000	0.9974 (ppm)
Pb (220.353 nm)	0.9962	ppm	0.0010	0.10	1975.0000	0.9962 (ppm)
Sb (206.834 nm)	0.9910	ppm	0.0151	1.52	869.2000	0.9910 (ppm)
Se (196.026 nm)	0.9975	ppm	0.0019	0.19	614.0000	0.9975 (ppm)
Si (251.611 nm)	4.9860	ppm	0.0500	1.00	10550.0000	4.9860 (ppm)
Sn (189.925 nm)	0.9848	ppm	0.0004	0.04	567.9000	0.9848 (ppm)
Sr (421.552 nm)	0.9912	ppm	0.0024	0.25	342800.0000	0.9912 (ppm)
Ti (336.122 nm)	1.0060	ppm	0.0047	0.46	100800.0000	1.0060 (ppm)
Tl (190.794 nm)	0.9877	ppm	0.0095	0.97	1069.0000	0.9877 (ppm)
V (292.401 nm)	0.9976	ppm	0.0016	0.16	30320.0000	0.9976 (ppm)
W (207.912 nm)	0.9923	ppm	0.0067	0.67	1621.0000	0.9923 (ppm)
Zn (202.548 nm)	0.9982	ppm	0.0006	0.06	15480.0000	0.9982 (ppm)
Zr (343.823 nm)	1.0680	ppm	0.0036	0.33	87170.0000	1.0680 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9687	366700.0000	0.0016	0.16
Y_R 371.029	0.9731	49360.0000	0.0131	1.35

Sample Name: CCB 6043772

Date: 1/15/2020 5:23:16 PM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.0000 u	ppm	0.0001	> 100.00	45.2300	0.0000 u (ppm)
Al (396.152 nm)	0.0004	ppm	0.0003	69.73	-311.1000	0.0004 (ppm)
As (188.980 nm)	0.0055	ppm	0.0011	19.72	1.9900	0.0055 (ppm)
B (249.678 nm)	0.0014	ppm	0.0010	72.62	1.9640	0.0014 (ppm)
Ba (233.527 nm)	0.0003	ppm	0.0002	54.14	84.8400	0.0003 (ppm)
Be (234.861 nm)	0.0002	ppm	0.0001	56.27	39.6100	0.0002 (ppm)
Ca (422.673 nm)	0.0056	ppm	0.0032	56.79	102.0000	0.0056 (ppm)
Cd (214.439 nm)	0.0002	ppm	0.0000	0.25	-2.9140	0.0002 (ppm)
Co (228.615 nm)	0.0003 u	ppm	0.0010	> 100.00	-4.4350	0.0003 u (ppm)
Cr (205.560 nm)	0.0001 u	ppm	0.0004	> 100.00	1.0490	0.0001 u (ppm)
Cu (324.754 nm)	0.0003	ppm	0.0001	19.35	147.5000	0.0003 (ppm)
Fe (238.204 nm)	0.0026	ppm	0.0025	95.37	-48.9300	0.0026 (ppm)
K (766.491 nm)	-0.0279 u	ppm	0.0727	> 100.00	-154.1000	-0.0279 u (ppm)
Li (670.783 nm)	0.0006 u	ppm	0.0020	> 100.00	162.4000	0.0006 u (ppm)
Mg (279.078 nm)	0.0016 u	ppm	0.0028	> 100.00	18.5400	0.0016 u (ppm)
Mn (259.372 nm)	0.0002	ppm	0.0000	2.81	60.1200	0.0002 (ppm)
Mo (204.598 nm)	0.0019	ppm	0.0002	8.99	5.7230	0.0019 (ppm)
Na (589.592 nm)	-0.0918 u	ppm	0.0030	3.28	416.9000	-0.0918 u (ppm)
Ni (231.604 nm)	0.0005	ppm	0.0000	7.99	-9.5730	0.0005 (ppm)
P (213.618 nm)	-0.0026 u	ppm	0.0009	32.86	2.0820	-0.0026 u (ppm)
Pb (220.353 nm)	-0.0010 u	ppm	0.0021	> 100.00	6.7140	-0.0010 u (ppm)
Sb (206.834 nm)	0.0065	ppm	0.0053	81.17	8.2590	0.0065 (ppm)
Se (196.026 nm)	0.0013	ppm	0.0016	> 100.00	2.2760	0.0013 (ppm)
Si (251.611 nm)	0.0010 u	ppm	0.0016	> 100.00	1.1980	0.0010 u (ppm)
Sn (189.925 nm)	-0.0015 u	ppm	0.0009	63.49	-1.2000	-0.0015 u (ppm)
Sr (421.552 nm)	0.0001	ppm	0.0001	> 100.00	-17.7200	0.0001 (ppm)
Ti (336.122 nm)	0.0014	ppm	0.0002	17.07	-20.3200	0.0014 (ppm)
Tl (190.794 nm)	0.0022 u	ppm	0.0046	> 100.00	7.8860	0.0022 u (ppm)
V (292.401 nm)	0.0002	ppm	0.0002	> 100.00	79.7400	0.0002 (ppm)
W (207.912 nm)	0.0017	ppm	0.0002	12.18	-3.0140	0.0017 (ppm)
Zn (202.548 nm)	0.0004	ppm	0.0003	66.16	14.7400	0.0004 (ppm)
Zr (343.823 nm)	0.0005	ppm	0.0001	14.47	851.8000	0.0005 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9776	370000.0000	0.0007	0.07
Y_R 371.029	0.9776	49590.0000	0.0047	0.48

Sample Name: CRI 6043784

Date: 1/15/2020 5:25:28 PM

Rack:Tube: S1:10

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.0100 R	ppm	0.0002	1.53	456.7000 R	0.0100 R (ppm)
Al (396.152 nm)	0.1955	ppm	0.0016	0.83	5669.0000	0.1955 (ppm)
As (188.980 nm)	0.0196	ppm	0.0000	0.11	10.6000	0.0196 (ppm)
B (249.678 nm)	0.1003	ppm	0.0024	2.34	1039.0000	0.1003 (ppm)
Ba (233.527 nm)	0.0203	ppm	0.0001	0.40	1797.0000	0.0203 (ppm)
Be (234.861 nm)	0.0041	ppm	0.0000	0.17	659.9000	0.0041 (ppm)
Ca (422.673 nm)	0.2053	ppm	0.0067	3.27	880.1000	0.2053 (ppm)
Cd (214.439 nm)	0.0104	ppm	0.0001	0.81	217.0000	0.0104 (ppm)
Co (228.615 nm)	0.0198	ppm	0.0000	0.20	247.4000	0.0198 (ppm)
Cr (205.560 nm)	0.0098	ppm	0.0003	3.06	44.1500	0.0098 (ppm)
Cu (324.754 nm)	0.0204	ppm	0.0005	2.23	932.6000	0.0204 (ppm)
Fe (238.204 nm)	0.2058	ppm	0.0018	0.90	463.7000	0.2058 (ppm)
K (766.491 nm)	1.0260	ppm	0.0943	9.19	920.4000	1.0260 (ppm)
Li (670.783 nm)	0.1025	ppm	0.0023	2.27	5960.0000	0.1025 (ppm)
Mg (279.078 nm)	0.0430	ppm	0.0024	5.49	129.9000	0.0430 (ppm)
Mn (259.372 nm)	0.0387	ppm	0.0003	0.82	3663.0000	0.0387 (ppm)
Mo (204.598 nm)	0.0423	ppm	0.0019	4.51	161.3000	0.0423 (ppm)
Na (589.592 nm)	0.9253	ppm	0.0012	0.13	5788.0000	0.9253 (ppm)
Ni (231.604 nm)	0.0210	ppm	0.0004	2.07	80.0100	0.0210 (ppm)
P (213.618 nm)	0.4202	ppm	0.0038	0.91	316.2000	0.4202 (ppm)
Pb (220.353 nm)	0.0114	ppm	0.0012	10.64	31.0700	0.0114 (ppm)
Sb (206.834 nm)	0.0199	ppm	0.0036	18.25	19.4900	0.0199 (ppm)
Se (196.026 nm)	0.0185	ppm	0.0052	28.13	13.7700	0.0185 (ppm)
Si (251.611 nm)	0.3992	ppm	0.0033	0.83	854.6000	0.3992 (ppm)
Sn (189.925 nm)	0.1937	ppm	0.0020	1.04	111.3000	0.1937 (ppm)
Sr (421.552 nm)	0.0409	ppm	0.0001	0.33	14110.0000	0.0409 (ppm)
Ti (336.122 nm)	0.0112	ppm	0.0006	5.72	969.5000	0.0112 (ppm)
Tl (190.794 nm)	0.0198	ppm	0.0024	11.95	27.0000	0.0198 (ppm)
V (292.401 nm)	0.0204	ppm	0.0005	2.26	687.5000	0.0204 (ppm)
W (207.912 nm)	0.1889	ppm	0.0025	1.32	301.9000	0.1889 (ppm)
Zn (202.548 nm)	0.0429	ppm	0.0002	0.52	672.0000	0.0429 (ppm)
Zr (343.823 nm)	0.1061	ppm	0.0010	0.91	9393.0000	0.1061 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9777	370000.0000	0.0067	0.68
Y_R 371.029	0.9764	49520.0000	0.0067	0.68

Sample Name: ICSA 6043781

Date: 1/15/2020 5:27:40 PM

Rack:Tube: S1:6

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.0005	ppm	0.0007	> 100.00	-947.2000	0.0005 (ppm)
Al (396.152 nm)	612.6000 o	ppm	0.0257	0.00	18570000.0000	612.6000 o (ppm)
As (188.980 nm)	0.0000 u	ppm	0.0048	> 100.00	-31.8700	0.0000 u (ppm)
B (249.678 nm)	-0.0048 u	ppm	0.0049	> 100.00	-729.6000	-0.0048 u (ppm)
Ba (233.527 nm)	0.0042	ppm	0.0000	0.51	565.5000	0.0042 (ppm)
Be (234.861 nm)	0.0007 u	ppm	0.0026	> 100.00	9168.0000	0.0007 u (ppm)
Ca (422.673 nm)	611.1000 o	ppm	3.1290	0.51	2383000.0000	611.1000 o (ppm)
Cd (214.439 nm)	0.0004	ppm	0.0003	73.32	91.2900	0.0004 (ppm)
Co (228.615 nm)	-0.0004 u	ppm	0.0021	> 100.00	70.0900	-0.0004 u (ppm)
Cr (205.560 nm)	-0.0002 u	ppm	0.0026	> 100.00	20.8600	-0.0002 u (ppm)
Cu (324.754 nm)	-0.0019 u	ppm	0.0003	16.58	-97.6700	-0.0019 u (ppm)
Fe (238.204 nm)	591.4000 o	ppm	0.7302	0.12	1493000.0000	591.4000 o (ppm)
K (766.491 nm)	-0.5043 u	ppm	0.1385	27.46	-247.5000	-0.5043 u (ppm)
Li (670.783 nm)	-0.0081 u	ppm	0.0018	21.64	732.4000	-0.0081 u (ppm)
Mg (279.078 nm)	578.0000 o	ppm	1.7830	0.31	1560000.0000	578.0000 o (ppm)
Mn (259.372 nm)	0.0272	ppm	0.0008	2.94	69760.0000	0.0272 (ppm)
Mo (204.598 nm)	0.0010 u	ppm	0.0024	> 100.00	68.1800	0.0010 u (ppm)
Na (589.592 nm)	-0.7073 u	ppm	0.0096	1.36	2107.0000	-0.7073 u (ppm)
Ni (231.604 nm)	0.0030	ppm	0.0002	7.42	-37.7700	0.0030 (ppm)
P (213.618 nm)	-0.0256 u	ppm	0.0070	27.40	5.5250	-0.0256 u (ppm)
Pb (220.353 nm)	0.0047	ppm	0.0017	36.49	-248.6000	0.0047 (ppm)
Sb (206.834 nm)	-0.0115 u	ppm	0.0030	25.79	-2.3750	-0.0115 u (ppm)
Se (196.026 nm)	0.0013 u	ppm	0.0071	> 100.00	-135.4000	0.0013 u (ppm)
Si (251.611 nm)	-0.0588 u	ppm	0.0030	5.09	-71.4900	-0.0588 u (ppm)
Sn (189.925 nm)	-0.0291 u	ppm	0.0100	34.35	-15.7800	-0.0291 u (ppm)
Sr (421.552 nm)	0.0030	ppm	0.0001	3.80	7549.0000	0.0030 (ppm)
Ti (336.122 nm)	0.0000 u	ppm	0.0001	> 100.00	-645.7000	0.0000 u (ppm)
Tl (190.794 nm)	-0.0063 u	ppm	0.0001	1.55	50.0700	-0.0063 u (ppm)
V (292.401 nm)	0.0001	ppm	0.0000	90.92	821.9000	0.0001 (ppm)
W (207.912 nm)	0.0030 u	ppm	0.0044	> 100.00	-21.4500	0.0030 u (ppm)
Zn (202.548 nm)	0.0062	ppm	0.0005	8.13	-89.8600	0.0062 (ppm)
Zr (343.823 nm)	0.1665	ppm	0.0003	0.21	2479.0000	0.1665 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.8272	313100.0000	0.0007	0.09
Y_R 371.029	0.8828	44780.0000	0.0032	0.36

Sample Name: ICSAB 6043782

Date: 1/15/2020 5:29:52 PM

Rack:Tube: S1:7

Weight (g): 1

Volume (mL): 1

Dilution: 1

**Analyte Results**

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.2749	ppm	0.0002	0.06	10080.0000	0.2749 (ppm)
Al (396.152 nm)	610.0000 o	ppm	1.4900	0.24	18490000.0000	610.0000 o (ppm)
As (188.980 nm)	0.5123	ppm	0.0168	3.28	276.1000	0.5123 (ppm)
B (249.678 nm)	0.5290	ppm	0.0001	0.02	4931.0000	0.5290 (ppm)
Ba (233.527 nm)	0.4786	ppm	0.0024	0.49	41090.0000	0.4786 (ppm)
Be (234.861 nm)	0.5243	ppm	0.0007	0.13	91320.0000	0.5243 (ppm)
Ca (422.673 nm)	612.7000 o	ppm	1.1960	0.20	2389000.0000	612.7000 o (ppm)
Cd (214.439 nm)	0.4608	ppm	0.0003	0.07	10030.0000	0.4608 (ppm)
Co (228.615 nm)	0.4522	ppm	0.0022	0.48	5924.0000	0.4522 (ppm)
Cr (205.560 nm)	0.4932	ppm	0.0018	0.37	2210.0000	0.4932 (ppm)
Cu (324.754 nm)	0.5470	ppm	0.0029	0.54	21370.0000	0.5470 (ppm)
Fe (238.204 nm)	591.1000 o	ppm	0.3533	0.06	1492000.0000	591.1000 o (ppm)
K (766.491 nm)	4.9100	ppm	0.0279	0.57	5276.0000	4.9100 (ppm)
Li (670.783 nm)	0.5376	ppm	0.0022	0.41	31780.0000	0.5376 (ppm)
Mg (279.078 nm)	587.6000 o	ppm	1.7670	0.30	1586000.0000	587.6000 o (ppm)
Mn (259.372 nm)	0.5120	ppm	0.0026	0.51	114800.0000	0.5120 (ppm)
Mo (204.598 nm)	0.5015	ppm	0.0026	0.51	1996.0000	0.5015 (ppm)
Na (589.592 nm)	4.7440	ppm	0.0259	0.55	30880.0000	4.7440 (ppm)
Ni (231.604 nm)	0.4510	ppm	0.0003	0.07	1927.0000	0.4510 (ppm)
P (213.618 nm)	0.4744	ppm	0.0105	2.21	355.2000	0.4744 (ppm)
Pb (220.353 nm)	0.4638	ppm	0.0025	0.54	658.0000	0.4638 (ppm)
Sb (206.834 nm)	0.5516	ppm	0.0012	0.22	490.3000	0.5516 (ppm)
Se (196.026 nm)	0.4679	ppm	0.0234	4.99	151.0000	0.4679 (ppm)
Si (251.611 nm)	2.5800	ppm	0.0045	0.18	5496.0000	2.5800 (ppm)
Sn (189.925 nm)	0.4577	ppm	0.0101	2.20	265.0000	0.4577 (ppm)
Sr (421.552 nm)	0.5113	ppm	0.0002	0.04	183400.0000	0.5113 (ppm)
Ti (336.122 nm)	0.5329	ppm	0.0013	0.25	52840.0000	0.5329 (ppm)
Tl (190.794 nm)	0.4425	ppm	0.0010	0.23	531.0000	0.4425 (ppm)
V (292.401 nm)	0.5146	ppm	0.0009	0.18	16420.0000	0.5146 (ppm)
W (207.912 nm)	0.4342	ppm	0.0013	0.31	685.7000	0.4342 (ppm)
Zn (202.548 nm)	0.4379	ppm	0.0012	0.28	6617.0000	0.4379 (ppm)
Zr (343.823 nm)	0.4305	ppm	0.0094	2.19	23830.0000	0.4305 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.8253	312400.0000	0.0023	0.28
Y_R 371.029	0.8754	44400.0000	0.0024	0.28

Sample Name: xRINSE 6043786

Date: 1/15/2020 5:32:04 PM

Rack:Tube: S1:8

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0001 u	ppm	0.0002	> 100.00	40.6300	-0.0001 u (ppm)
Al (396.152 nm)	0.2055 Z	ppm	0.0900	43.78	5907.0000 Z	0.2055 Z (ppm)
As (188.980 nm)	0.0037	ppm	0.0016	43.36	0.9166	0.0037 (ppm)
B (249.678 nm)	0.0011	ppm	0.0006	51.02	-1.9010	0.0011 (ppm)
Ba (233.527 nm)	0.0002	ppm	0.0000	25.15	74.8500	0.0002 (ppm)
Be (234.861 nm)	0.0002	ppm	0.0000	13.05	44.7100	0.0002 (ppm)
Ca (422.673 nm)	0.0934	ppm	0.0015	1.65	444.4000	0.0934 (ppm)
Cd (214.439 nm)	0.0000	ppm	0.0000	88.34	-6.0060	0.0000 (ppm)
Co (228.615 nm)	0.0001	ppm	0.0001	> 100.00	-8.0170	0.0001 (ppm)
Cr (205.560 nm)	-0.0005 u	ppm	0.0008	> 100.00	-1.5410	-0.0005 u (ppm)
Cu (324.754 nm)	0.0009	ppm	0.0004	40.65	170.9000	0.0009 (ppm)
Fe (238.204 nm)	0.1467 Z	ppm	0.0048	3.24	314.8000 Z	0.1467 Z (ppm)
K (766.491 nm)	-0.0039 u	ppm	0.0251	> 100.00	-129.6000	-0.0039 u (ppm)
Li (670.783 nm)	0.0013	ppm	0.0014	> 100.00	201.5000	0.0013 (ppm)
Mg (279.078 nm)	0.2191 Z	ppm	0.0955	43.58	605.9000 Z	0.2191 Z (ppm)
Mn (259.372 nm)	0.0003	ppm	0.0002	56.85	92.9000	0.0003 (ppm)
Mo (204.598 nm)	0.0048	ppm	0.0011	22.09	16.6700	0.0048 (ppm)
Na (589.592 nm)	-0.0585 u	ppm	0.0021	3.67	594.2000	-0.0585 u (ppm)
Ni (231.604 nm)	0.0001 u	ppm	0.0002	> 100.00	-11.6900	0.0001 u (ppm)
P (213.618 nm)	-0.0040 u	ppm	0.0041	> 100.00	1.0360	-0.0040 u (ppm)
Pb (220.353 nm)	-0.0005 u	ppm	0.0017	> 100.00	7.6690	-0.0005 u (ppm)
Sb (206.834 nm)	0.0000 u	ppm	0.0020	> 100.00	2.4960	0.0000 u (ppm)
Se (196.026 nm)	0.0039 u	ppm	0.0074	> 100.00	3.8920	0.0039 u (ppm)
Si (251.611 nm)	-0.0010 u	ppm	0.0013	> 100.00	-1.5430	-0.0010 u (ppm)
Sn (189.925 nm)	-0.0027 u	ppm	0.0016	60.77	-1.9050	-0.0027 u (ppm)
Sr (421.552 nm)	0.0000 u	ppm	0.0001	> 100.00	-40.9700	0.0000 u (ppm)
Ti (336.122 nm)	0.0005	ppm	0.0001	22.69	-107.4000	0.0005 (ppm)
Tl (190.794 nm)	0.0017	ppm	0.0010	59.86	7.3640	0.0017 (ppm)
V (292.401 nm)	0.0000 u	ppm	0.0003	> 100.00	74.4400	0.0000 u (ppm)
W (207.912 nm)	0.0124	ppm	0.0017	14.16	14.2500	0.0124 (ppm)
Zn (202.548 nm)	0.0007	ppm	0.0001	15.69	19.1600	0.0007 (ppm)
Zr (343.823 nm)	0.0013	ppm	0.0002	12.55	916.0000	0.0013 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9696	367000.0000	0.0023	0.24
Y_R 371.029	0.9775	49580.0000	0.0008	0.08

Sample Name: MB 440-590696/1-B

Date: 1/15/2020 5:34:16 PM

Rack:Tube: 2:23

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0005 u	ppm	0.0001	27.84	26.7600	-0.0005 u (ppm)
Al (396.152 nm)	0.0199	ppm	0.0029	14.69	277.7000	0.0199 (ppm)
As (188.980 nm)	0.0041	ppm	0.0033	80.15	1.1570	0.0041 (ppm)
B (249.678 nm)	0.0008	ppm	0.0006	66.54	-4.0160	0.0008 (ppm)
Ba (233.527 nm)	0.0001	ppm	0.0000	2.54	69.6900	0.0001 (ppm)
Be (234.861 nm)	0.0000 u	ppm	0.0000	> 100.00	19.1200	0.0000 u (ppm)
Ca (422.673 nm)	0.0373	ppm	0.0003	0.89	225.6000	0.0373 (ppm)
Cd (214.439 nm)	0.0000	ppm	0.0001	> 100.00	-5.3480	0.0000 (ppm)
Co (228.615 nm)	0.0000 u	ppm	0.0005	> 100.00	-9.1680	0.0000 u (ppm)
Cr (205.560 nm)	-0.0002 u	ppm	0.0005	> 100.00	-0.3167	-0.0002 u (ppm)
Cu (324.754 nm)	0.0004	ppm	0.0002	41.64	149.8000	0.0004 (ppm)
Fe (238.204 nm)	0.0206	ppm	0.0021	10.25	-3.7160	0.0206 (ppm)
K (766.491 nm)	0.0080 u	ppm	0.0732	> 100.00	-117.5000	0.0080 u (ppm)
Li (670.783 nm)	-0.0014 u	ppm	0.0003	20.03	45.7600	-0.0014 u (ppm)
Mg (279.078 nm)	0.0272	ppm	0.0018	6.62	87.6900	0.0272 (ppm)
Mn (259.372 nm)	0.0002	ppm	0.0000	1.74	65.3700	0.0002 (ppm)
Mo (204.598 nm)	0.0003 u	ppm	0.0006	> 100.00	-0.5521	0.0003 u (ppm)
Na (589.592 nm)	-0.0669 u	ppm	0.0043	6.36	548.8000	-0.0669 u (ppm)
Ni (231.604 nm)	0.0002 u	ppm	0.0006	> 100.00	-11.1400	0.0002 u (ppm)
P (213.618 nm)	-0.0013 u	ppm	0.0013	> 100.00	3.1470	-0.0013 u (ppm)
Pb (220.353 nm)	-0.0005 u	ppm	0.0013	> 100.00	7.6760	-0.0005 u (ppm)
Sb (206.834 nm)	0.0056	ppm	0.0013	23.73	7.4740	0.0056 (ppm)
Se (196.026 nm)	0.0021 u	ppm	0.0070	> 100.00	2.7930	0.0021 u (ppm)
Si (251.611 nm)	-0.0008 u	ppm	0.0003	31.69	-2.2600	-0.0008 u (ppm)
Sn (189.925 nm)	-0.0005 u	ppm	0.0019	> 100.00	-0.6351	-0.0005 u (ppm)
Sr (421.552 nm)	0.0002	ppm	0.0001	47.82	45.3600	0.0002 (ppm)
Ti (336.122 nm)	0.0001 u	ppm	0.0001	> 100.00	-151.2000	0.0001 u (ppm)
Tl (190.794 nm)	-0.0023 u	ppm	0.0006	26.51	2.9480	-0.0023 u (ppm)
V (292.401 nm)	-0.0001 u	ppm	0.0001	> 100.00	73.0700	-0.0001 u (ppm)
W (207.912 nm)	0.0027	ppm	0.0005	18.78	-1.3500	0.0027 (ppm)
Zn (202.548 nm)	0.0016	ppm	0.0002	11.32	33.2600	0.0016 (ppm)
Zr (343.823 nm)	0.0006	ppm	0.0001	13.00	860.1000	0.0006 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9765	369600.0000	0.0009	0.09
Y_R 371.029	0.9798	49700.0000	0.0025	0.25

Sample Name: LCS 440-590696/2-B

Date: 1/15/2020 5:36:28 PM

Rack:Tube: 2:24

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.2305	ppm	0.0014	0.60	9341.0000	0.2305 (ppm)
Al (396.152 nm)	0.4710	ppm	0.0005	0.10	14490.0000	0.4710 (ppm)
As (188.980 nm)	0.4691	ppm	0.0070	1.49	280.6000	0.4691 (ppm)
B (249.678 nm)	0.4691	ppm	0.0013	0.27	4955.0000	0.4691 (ppm)
Ba (233.527 nm)	0.4767	ppm	0.0044	0.92	40790.0000	0.4767 (ppm)
Be (234.861 nm)	0.4736	ppm	0.0003	0.06	74320.0000	0.4736 (ppm)
Ca (422.673 nm)	2.4170	ppm	0.0072	0.30	9504.0000	2.4170 (ppm)
Cd (214.439 nm)	0.4803	ppm	0.0002	0.04	10360.0000	0.4803 (ppm)
Co (228.615 nm)	0.4782	ppm	0.0009	0.18	6174.0000	0.4782 (ppm)
Cr (205.560 nm)	0.4770	ppm	0.0003	0.06	2118.0000	0.4770 (ppm)
Cu (324.754 nm)	0.4720	ppm	0.0009	0.19	18600.0000	0.4720 (ppm)
Fe (238.204 nm)	0.4668	ppm	0.0048	1.03	1122.0000	0.4668 (ppm)
K (766.491 nm)	4.8400	ppm	0.1149	2.38	4811.0000	4.8400 (ppm)
Li (670.783 nm)	0.4748	ppm	0.0032	0.68	27100.0000	0.4748 (ppm)
Mg (279.078 nm)	2.4320	ppm	0.0227	0.94	6578.0000	2.4320 (ppm)
Mn (259.372 nm)	0.4782	ppm	0.0001	0.02	44470.0000	0.4782 (ppm)
Mo (204.598 nm)	0.4547	ppm	0.0004	0.10	1750.0000	0.4547 (ppm)
Na (589.592 nm)	4.6690	ppm	0.0202	0.43	25550.0000	4.6690 (ppm)
Ni (231.604 nm)	0.4804	ppm	0.0012	0.24	2096.0000	0.4804 (ppm)
P (213.618 nm)	0.4716	ppm	0.0034	0.72	335.5000	0.4716 (ppm)
Pb (220.353 nm)	0.4747	ppm	0.0009	0.18	945.8000	0.4747 (ppm)
Sb (206.834 nm)	0.4260	ppm	0.0063	1.47	375.0000	0.4260 (ppm)
Se (196.026 nm)	0.4679	ppm	0.0044	0.95	288.7000	0.4679 (ppm)
Si (251.611 nm)	2.3550	ppm	0.0148	0.63	4980.0000	2.3550 (ppm)
Sn (189.925 nm)	0.4212	ppm	0.0022	0.52	242.7000	0.4212 (ppm)
Sr (421.552 nm)	0.4728	ppm	0.0016	0.34	163500.0000	0.4728 (ppm)
Ti (336.122 nm)	0.4647	ppm	0.0022	0.47	46490.0000	0.4647 (ppm)
Tl (190.794 nm)	0.4804	ppm	0.0008	0.16	523.3000	0.4804 (ppm)
V (292.401 nm)	0.4763	ppm	0.0010	0.21	14520.0000	0.4763 (ppm)
W (207.912 nm)	0.4561	ppm	0.0019	0.42	742.3000	0.4561 (ppm)
Zn (202.548 nm)	0.4787	ppm	0.0004	0.09	7428.0000	0.4787 (ppm)
Zr (343.823 nm)	0.5886	ppm	0.0061	1.04	48430.0000	0.5886 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9705	367300.0000	0.0038	0.39
Y_R 371.029	0.9739	49400.0000	0.0057	0.58

Sample Name: 440-259104-G-1-B

Date: 1/15/2020 5:38:40 PM

Rack:Tube: 2:25

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0008 u	ppm	0.0001	16.56	11.0900	-0.0008 u (ppm)
Al (396.152 nm)	0.0211	ppm	0.0004	1.72	377.8000	0.0211 (ppm)
As (188.980 nm)	0.0012 u	ppm	0.0070	> 100.00	-0.7862	0.0012 u (ppm)
B (249.678 nm)	0.2800	ppm	0.0000	0.01	2979.0000	0.2800 (ppm)
Ba (233.527 nm)	0.0843	ppm	0.0005	0.60	7267.0000	0.0843 (ppm)
Be (234.861 nm)	0.0002	ppm	0.0001	26.05	50.5600	0.0002 (ppm)
Ca (422.673 nm)	62.3400	ppm	0.0513	0.08	243200.0000	62.3400 (ppm)
Cd (214.439 nm)	0.0003	ppm	0.0003	87.80	0.8059	0.0003 (ppm)
Co (228.615 nm)	0.0004	ppm	0.0002	55.89	-1.7430	0.0004 (ppm)
Cr (205.560 nm)	0.0007	ppm	0.0005	76.92	4.3900	0.0007 (ppm)
Cu (324.754 nm)	0.0099	ppm	0.0003	2.69	476.7000	0.0099 (ppm)
Fe (238.204 nm)	0.0384	ppm	0.0038	9.79	42.8100	0.0384 (ppm)
K (766.491 nm)	12.4300	ppm	0.1038	0.84	12550.0000	12.4300 (ppm)
Li (670.783 nm)	0.0209	ppm	0.0003	1.61	1461.0000	0.0209 (ppm)
Mg (279.078 nm)	20.2900	ppm	0.0687	0.34	54790.0000	20.2900 (ppm)
Mn (259.372 nm)	0.0102	ppm	0.0001	0.76	1072.0000	0.0102 (ppm)
Mo (204.598 nm)	0.0116	ppm	0.0020	16.83	42.9400	0.0116 (ppm)
Na (589.592 nm)	105.1000	ppm	0.1361	0.13	555300.0000	105.1000 (ppm)
Ni (231.604 nm)	-0.0013 u	ppm	0.0003	20.03	-18.5900	-0.0013 u (ppm)
P (213.618 nm)	3.8580	ppm	0.0010	0.03	2881.0000	3.8580 (ppm)
Pb (220.353 nm)	0.0018 u	ppm	0.0052	> 100.00	12.9300	0.0018 u (ppm)
Sb (206.834 nm)	0.0042	ppm	0.0054	> 100.00	6.2260	0.0042 (ppm)
Se (196.026 nm)	0.0057	ppm	0.0040	69.48	4.7250	0.0057 (ppm)
Si (251.611 nm)	17.3500	ppm	0.1344	0.77	36140.0000	17.3500 (ppm)
Sn (189.925 nm)	0.0030	ppm	0.0009	29.08	1.4040	0.0030 (ppm)
Sr (421.552 nm)	0.4816	ppm	0.0005	0.10	167200.0000	0.4816 (ppm)
Ti (336.122 nm)	0.0034	ppm	0.0005	13.90	135.4000	0.0034 (ppm)
Tl (190.794 nm)	0.0028	ppm	0.0009	30.53	8.2440	0.0028 (ppm)
V (292.401 nm)	0.0051	ppm	0.0003	6.16	301.3000	0.0051 (ppm)
W (207.912 nm)	0.0086	ppm	0.0011	12.36	7.7330	0.0086 (ppm)
Zn (202.548 nm)	0.0368	ppm	0.0001	0.34	566.5000	0.0368 (ppm)
Zr (343.823 nm)	0.0040	ppm	0.0002	5.81	1144.0000	0.0040 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9349	353900.0000	0.0020	0.21
Y_R 371.029	0.9510	48240.0000	0.0026	0.28

Sample Name: 440-259104-G-1-C MS

Date: 1/15/2020 5:40:52 PM

Rack:Tube: 2:26

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.1918	ppm	0.0003	0.16	7772.0000	0.1918 (ppm)
Al (396.152 nm)	0.4327	ppm	0.0001	0.03	13300.0000	0.4327 (ppm)
As (188.980 nm)	0.4160	ppm	0.0044	1.06	248.7000	0.4160 (ppm)
B (249.678 nm)	0.6851	ppm	0.0013	0.19	7267.0000	0.6851 (ppm)
Ba (233.527 nm)	0.4667	ppm	0.0003	0.06	39940.0000	0.4667 (ppm)
Be (234.861 nm)	0.4000	ppm	0.0002	0.04	62780.0000	0.4000 (ppm)
Ca (422.673 nm)	63.7300	ppm	0.4382	0.69	248600.0000	63.7300 (ppm)
Cd (214.439 nm)	0.3876	ppm	0.0002	0.06	8362.0000	0.3876 (ppm)
Co (228.615 nm)	0.3839	ppm	0.0011	0.29	4957.0000	0.3839 (ppm)
Cr (205.560 nm)	0.3946	ppm	0.0014	0.37	1753.0000	0.3946 (ppm)
Cu (324.754 nm)	0.4177	ppm	0.0003	0.06	16430.0000	0.4177 (ppm)
Fe (238.204 nm)	0.3877	ppm	0.0008	0.21	924.1000	0.3877 (ppm)
K (766.491 nm)	16.1700	ppm	0.2092	1.29	16370.0000	16.1700 (ppm)
Li (670.783 nm)	0.4039	ppm	0.0015	0.36	23210.0000	0.4039 (ppm)
Mg (279.078 nm)	22.0800	ppm	0.0091	0.04	59640.0000	22.0800 (ppm)
Mn (259.372 nm)	0.3965	ppm	0.0005	0.12	36960.0000	0.3965 (ppm)
Mo (204.598 nm)	0.4061	ppm	0.0002	0.06	1563.0000	0.4061 (ppm)
Na (589.592 nm)	107.6000	ppm	0.1800	0.17	568300.0000	107.6000 (ppm)
Ni (231.604 nm)	0.3814	ppm	0.0011	0.30	1660.0000	0.3814 (ppm)
P (213.618 nm)	4.2630	ppm	0.0041	0.10	3165.0000	4.2630 (ppm)
Pb (220.353 nm)	0.3790	ppm	0.0007	0.18	757.7000	0.3790 (ppm)
Sb (206.834 nm)	0.3942	ppm	0.0201	5.11	347.2000	0.3942 (ppm)
Se (196.026 nm)	0.4313	ppm	0.0055	1.29	266.0000	0.4313 (ppm)
Si (251.611 nm)	19.3100	ppm	0.0578	0.30	40290.0000	19.3100 (ppm)
Sn (189.925 nm)	0.3773	ppm	0.0087	2.31	217.4000	0.3773 (ppm)
Sr (421.552 nm)	0.8645	ppm	0.0066	0.77	299600.0000	0.8645 (ppm)
Ti (336.122 nm)	0.4337	ppm	0.0029	0.66	43330.0000	0.4337 (ppm)
Tl (190.794 nm)	0.3921	ppm	0.0021	0.53	426.6000	0.3921 (ppm)
V (292.401 nm)	0.4097	ppm	0.0008	0.19	12570.0000	0.4097 (ppm)
W (207.912 nm)	0.4116	ppm	0.0053	1.29	668.2000	0.4116 (ppm)
Zn (202.548 nm)	0.4294	ppm	0.0004	0.10	6653.0000	0.4294 (ppm)
Zr (343.823 nm)	0.4498	ppm	0.0083	1.83	37210.0000	0.4498 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9366	354500.0000	0.0011	0.11
Y_R 371.029	0.9479	48080.0000	0.0019	0.20

Sample Name: 440-259104-G-1-D MSD

Date: 1/15/2020 5:43:02 PM

Rack:Tube: 2:27

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.1966	ppm	0.0003	0.13	7966.0000	0.1966 (ppm)
Al (396.152 nm)	0.4383	ppm	0.0002	0.05	13470.0000	0.4383 (ppm)
As (188.980 nm)	0.4170	ppm	0.0098	2.35	249.2000	0.4170 (ppm)
B (249.678 nm)	0.6933	ppm	0.0002	0.03	7354.0000	0.6933 (ppm)
Ba (233.527 nm)	0.4709	ppm	0.0015	0.33	40290.0000	0.4709 (ppm)
Be (234.861 nm)	0.4073	ppm	0.0005	0.13	63910.0000	0.4073 (ppm)
Ca (422.673 nm)	63.5800	ppm	0.2359	0.37	248000.0000	63.5800 (ppm)
Cd (214.439 nm)	0.3957	ppm	0.0003	0.08	8538.0000	0.3957 (ppm)
Co (228.615 nm)	0.3950	ppm	0.0006	0.16	5101.0000	0.3950 (ppm)
Cr (205.560 nm)	0.4031	ppm	0.0008	0.19	1791.0000	0.4031 (ppm)
Cu (324.754 nm)	0.4247	ppm	0.0012	0.29	16700.0000	0.4247 (ppm)
Fe (238.204 nm)	0.3943	ppm	0.0022	0.56	940.6000	0.3943 (ppm)
K (766.491 nm)	16.0000	ppm	0.0775	0.48	16190.0000	16.0000 (ppm)
Li (670.783 nm)	0.4106	ppm	0.0009	0.22	23600.0000	0.4106 (ppm)
Mg (279.078 nm)	22.0000	ppm	0.0599	0.27	59410.0000	22.0000 (ppm)
Mn (259.372 nm)	0.4036	ppm	0.0003	0.07	37620.0000	0.4036 (ppm)
Mo (204.598 nm)	0.4056	ppm	0.0005	0.13	1561.0000	0.4056 (ppm)
Na (589.592 nm)	107.1000	ppm	0.5010	0.47	565800.0000	107.1000 (ppm)
Ni (231.604 nm)	0.3894	ppm	0.0003	0.08	1695.0000	0.3894 (ppm)
P (213.618 nm)	4.2840	ppm	0.0004	0.01	3180.0000	4.2840 (ppm)
Pb (220.353 nm)	0.3881	ppm	0.0033	0.84	775.6000	0.3881 (ppm)
Sb (206.834 nm)	0.3938	ppm	0.0049	1.25	346.9000	0.3938 (ppm)
Se (196.026 nm)	0.4285	ppm	0.0018	0.43	264.3000	0.4285 (ppm)
Si (251.611 nm)	19.4000	ppm	0.0795	0.41	40480.0000	19.4000 (ppm)
Sn (189.925 nm)	0.3884	ppm	0.0009	0.24	223.8000	0.3884 (ppm)
Sr (421.552 nm)	0.8687	ppm	0.0032	0.37	301000.0000	0.8687 (ppm)
Ti (336.122 nm)	0.4411	ppm	0.0026	0.58	44080.0000	0.4411 (ppm)
Tl (190.794 nm)	0.4015	ppm	0.0048	1.19	436.8000	0.4015 (ppm)
V (292.401 nm)	0.4170	ppm	0.0005	0.12	12790.0000	0.4170 (ppm)
W (207.912 nm)	0.4107	ppm	0.0043	1.05	667.0000	0.4107 (ppm)
Zn (202.548 nm)	0.4375	ppm	0.0002	0.06	6778.0000	0.4375 (ppm)
Zr (343.823 nm)	0.4505	ppm	0.0070	1.55	37270.0000	0.4505 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9363	354400.0000	0.0014	0.15
Y_R 371.029	0.9533	48360.0000	0.0050	0.52

Sample Name: CCV 6043773

Date: 1/15/2020 5:45:14 PM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.4965	ppm	0.0023	0.47	20040.0000	0.4965 (ppm)
Al (396.152 nm)	0.9922	ppm	0.0051	0.51	30860.0000	0.9922 (ppm)
As (188.980 nm)	0.9907	ppm	0.0081	0.82	594.1000	0.9907 (ppm)
B (249.678 nm)	0.9938	ppm	0.0063	0.63	10500.0000	0.9938 (ppm)
Ba (233.527 nm)	1.0040	ppm	0.0024	0.24	85850.0000	1.0040 (ppm)
Be (234.861 nm)	0.9958	ppm	0.0043	0.43	156200.0000	0.9958 (ppm)
Ca (422.673 nm)	5.0230	ppm	0.0091	0.18	19660.0000	5.0230 (ppm)
Cd (214.439 nm)	0.9963	ppm	0.0039	0.39	21500.0000	0.9963 (ppm)
Co (228.615 nm)	0.9932	ppm	0.0040	0.40	12830.0000	0.9932 (ppm)
Cr (205.560 nm)	0.9951	ppm	0.0047	0.47	4417.0000	0.9951 (ppm)
Cu (324.754 nm)	0.9955	ppm	0.0058	0.58	39070.0000	0.9955 (ppm)
Fe (238.204 nm)	1.0180	ppm	0.0011	0.11	2512.0000	1.0180 (ppm)
K (766.491 nm)	9.8850	ppm	0.0634	0.64	9957.0000	9.8850 (ppm)
Li (670.783 nm)	0.9994	ppm	0.0017	0.17	56910.0000	0.9994 (ppm)
Mg (279.078 nm)	5.0720	ppm	0.0153	0.30	13700.0000	5.0720 (ppm)
Mn (259.372 nm)	0.9927	ppm	0.0033	0.33	92290.0000	0.9927 (ppm)
Mo (204.598 nm)	0.9996	ppm	0.0044	0.44	3850.0000	0.9996 (ppm)
Na (589.592 nm)	10.0400	ppm	0.0121	0.12	53880.0000	10.0400 (ppm)
Ni (231.604 nm)	0.9962	ppm	0.0034	0.35	4358.0000	0.9962 (ppm)
P (213.618 nm)	0.9975	ppm	0.0133	1.33	704.5000	0.9975 (ppm)
Pb (220.353 nm)	0.9938	ppm	0.0061	0.61	1971.0000	0.9938 (ppm)
Sb (206.834 nm)	0.9915	ppm	0.0224	2.26	869.4000	0.9915 (ppm)
Se (196.026 nm)	0.9940	ppm	0.0084	0.85	611.9000	0.9940 (ppm)
Si (251.611 nm)	5.0530	ppm	0.0668	1.32	10690.0000	5.0530 (ppm)
Sn (189.925 nm)	1.0170	ppm	0.0018	0.18	586.2000	1.0170 (ppm)
Sr (421.552 nm)	0.9953	ppm	0.0022	0.23	344200.0000	0.9953 (ppm)
Ti (336.122 nm)	1.0180	ppm	0.0059	0.58	102100.0000	1.0180 (ppm)
Tl (190.794 nm)	0.9888	ppm	0.0061	0.62	1070.0000	0.9888 (ppm)
V (292.401 nm)	0.9965	ppm	0.0043	0.43	30290.0000	0.9965 (ppm)
W (207.912 nm)	1.0110	ppm	0.0055	0.55	1651.0000	1.0110 (ppm)
Zn (202.548 nm)	1.0000	ppm	0.0052	0.52	15510.0000	1.0000 (ppm)
Zr (343.823 nm)	1.0160	ppm	0.0009	0.09	82970.0000	1.0160 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9587	362900.0000	0.0039	0.40
Y_R 371.029	0.9590	48640.0000	0.0026	0.28

Sample Name: CCB 6043772

Date: 1/15/2020 5:52:00 PM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0002 u	ppm	0.0001	21.75	36.5800	-0.0002 u (ppm)
Al (396.152 nm)	0.0004	ppm	0.0006	> 100.00	-311.7000	0.0004 (ppm)
As (188.980 nm)	0.0026	ppm	0.0024	93.47	0.2659	0.0026 (ppm)
B (249.678 nm)	0.0010	ppm	0.0001	9.09	-1.7730	0.0010 (ppm)
Ba (233.527 nm)	0.0000 u	ppm	0.0001	> 100.00	62.5700	0.0000 u (ppm)
Be (234.861 nm)	0.0001	ppm	0.0000	15.16	25.9000	0.0001 (ppm)
Ca (422.673 nm)	0.0055 u	ppm	0.0148	> 100.00	101.8000	0.0055 u (ppm)
Cd (214.439 nm)	0.0001	ppm	0.0001	> 100.00	-5.2700	0.0001 (ppm)
Co (228.615 nm)	0.0005	ppm	0.0007	> 100.00	-2.6240	0.0005 (ppm)
Cr (205.560 nm)	-0.0001 u	ppm	0.0001	> 100.00	0.1912	-0.0001 u (ppm)
Cu (324.754 nm)	0.0005	ppm	0.0002	38.94	154.7000	0.0005 (ppm)
Fe (238.204 nm)	0.0004 u	ppm	0.0024	> 100.00	-54.6400	0.0004 u (ppm)
K (766.491 nm)	-0.0146 u	ppm	0.0120	82.20	-140.6000	-0.0146 u (ppm)
Li (670.783 nm)	0.0020	ppm	0.0015	74.41	243.6000	0.0020 (ppm)
Mg (279.078 nm)	0.0029	ppm	0.0009	32.71	22.1200	0.0029 (ppm)
Mn (259.372 nm)	0.0001	ppm	0.0000	40.18	54.9800	0.0001 (ppm)
Mo (204.598 nm)	0.0019	ppm	0.0003	14.28	5.5940	0.0019 (ppm)
Na (589.592 nm)	-0.0460 u	ppm	0.0022	4.81	658.5000	-0.0460 u (ppm)
Ni (231.604 nm)	0.0005	ppm	0.0003	54.04	-9.6570	0.0005 (ppm)
P (213.618 nm)	-0.0029 u	ppm	0.0016	55.88	1.8720	-0.0029 u (ppm)
Pb (220.353 nm)	0.0033	ppm	0.0010	31.17	15.2000	0.0033 (ppm)
Sb (206.834 nm)	0.0014	ppm	0.0020	> 100.00	3.8030	0.0014 (ppm)
Se (196.026 nm)	-0.0029 u	ppm	0.0061	> 100.00	-0.2623	-0.0029 u (ppm)
Si (251.611 nm)	-0.0014 u	ppm	0.0004	27.84	-3.5180	-0.0014 u (ppm)
Sn (189.925 nm)	0.0020	ppm	0.0010	49.11	0.7758	0.0020 (ppm)
Sr (421.552 nm)	0.0000 u	ppm	0.0001	> 100.00	-23.5600	0.0000 u (ppm)
Ti (336.122 nm)	0.0008	ppm	0.0002	30.63	-76.8900	0.0008 (ppm)
Tl (190.794 nm)	0.0037	ppm	0.0002	5.93	9.6560	0.0037 (ppm)
V (292.401 nm)	0.0000 u	ppm	0.0001	> 100.00	75.2900	0.0000 u (ppm)
W (207.912 nm)	0.0034 u	ppm	0.0067	> 100.00	-0.2975	0.0034 u (ppm)
Zn (202.548 nm)	0.0004	ppm	0.0003	73.62	15.0900	0.0004 (ppm)
Zr (343.823 nm)	0.0004	ppm	0.0000	3.49	843.2000	0.0004 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9776	370000.0000	0.0024	0.25
Y_R 371.029	0.9743	49420.0000	0.0012	0.12

Sample Name: MB 440-590647/1-A

Date: 1/15/2020 5:54:12 PM

Rack:Tube: 2:13

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0002 u	ppm	0.0000	19.42	36.4600	-0.0002 u (ppm)
Al (396.152 nm)	0.0044	ppm	0.0003	5.96	-192.9000	0.0044 (ppm)
As (188.980 nm)	0.0043	ppm	0.0021	48.34	1.2730	0.0043 (ppm)
B (249.678 nm)	0.0004	ppm	0.0000	8.43	-8.7520	0.0004 (ppm)
Ba (233.527 nm)	0.0002	ppm	0.0001	25.69	77.4600	0.0002 (ppm)
Be (234.861 nm)	0.0001	ppm	0.0000	63.15	23.5400	0.0001 (ppm)
Ca (422.673 nm)	0.0240	ppm	0.0064	26.47	173.9000	0.0240 (ppm)
Cd (214.439 nm)	-0.0001 u	ppm	0.0002	> 100.00	-8.5880	-0.0001 u (ppm)
Co (228.615 nm)	0.0000 u	ppm	0.0015	> 100.00	-8.9670	0.0000 u (ppm)
Cr (205.560 nm)	-0.0004 u	ppm	0.0001	21.26	-1.4460	-0.0004 u (ppm)
Cu (324.754 nm)	0.0010	ppm	0.0005	50.49	174.4000	0.0010 (ppm)
Fe (238.204 nm)	0.0044	ppm	0.0024	54.78	-44.4400	0.0044 (ppm)
K (766.491 nm)	-0.0585 u	ppm	0.0061	10.40	-185.3000	-0.0585 u (ppm)
Li (670.783 nm)	0.0014 u	ppm	0.0027	> 100.00	204.0000	0.0014 u (ppm)
Mg (279.078 nm)	0.0037	ppm	0.0027	73.30	24.3200	0.0037 (ppm)
Mn (259.372 nm)	0.0012	ppm	0.0001	5.20	152.4000	0.0012 (ppm)
Mo (204.598 nm)	0.0000 u	ppm	0.0008	> 100.00	-1.7770	0.0000 u (ppm)
Na (589.592 nm)	-0.0559 u	ppm	0.0123	22.00	606.2000	-0.0559 u (ppm)
Ni (231.604 nm)	0.0002 u	ppm	0.0009	> 100.00	-10.8900	0.0002 u (ppm)
P (213.618 nm)	-0.0031 u	ppm	0.0008	27.45	1.7830	-0.0031 u (ppm)
Pb (220.353 nm)	0.0006	ppm	0.0006	> 100.00	9.8750	0.0006 (ppm)
Sb (206.834 nm)	-0.0008 u	ppm	0.0009	> 100.00	1.8560	-0.0008 u (ppm)
Se (196.026 nm)	0.0024	ppm	0.0008	35.11	2.9800	0.0024 (ppm)
Si (251.611 nm)	0.0018	ppm	0.0007	40.44	3.1160	0.0018 (ppm)
Sn (189.925 nm)	-0.0005 u	ppm	0.0033	> 100.00	-0.6115	-0.0005 u (ppm)
Sr (421.552 nm)	0.0001	ppm	0.0000	34.48	-3.5370	0.0001 (ppm)
Ti (336.122 nm)	0.0002 u	ppm	0.0002	> 100.00	-142.1000	0.0002 u (ppm)
Tl (190.794 nm)	0.0010	ppm	0.0004	43.54	6.6210	0.0010 (ppm)
V (292.401 nm)	0.0003	ppm	0.0003	> 100.00	83.5600	0.0003 (ppm)
W (207.912 nm)	0.0025	ppm	0.0012	47.34	-1.7670	0.0025 (ppm)
Zn (202.548 nm)	0.0020	ppm	0.0000	0.65	39.4800	0.0020 (ppm)
Zr (343.823 nm)	0.0005	ppm	0.0001	18.18	852.3000	0.0005 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9836	372300.0000	0.0033	0.33
Y_R 371.029	0.9833	49880.0000	0.0018	0.18

## Sample Name: LCS 440-590647/2-A

Date: 1/15/2020 5:56:24 PM

Rack:Tube: 2:14

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.2356	ppm	0.0017	0.72	9530.0000	0.2356 (ppm)
Al (396.152 nm)	0.4820	ppm	0.0004	0.08	14780.0000	0.4820 (ppm)
As (188.980 nm)	0.4856	ppm	0.0045	0.92	290.4000	0.4856 (ppm)
B (249.678 nm)	0.4800	ppm	0.0016	0.34	5071.0000	0.4800 (ppm)
Ba (233.527 nm)	0.4918	ppm	0.0006	0.11	42070.0000	0.4918 (ppm)
Be (234.861 nm)	0.4886	ppm	0.0009	0.19	76670.0000	0.4886 (ppm)
Ca (422.673 nm)	2.4820	ppm	0.0168	0.68	9756.0000	2.4820 (ppm)
Cd (214.439 nm)	0.4945	ppm	0.0000	0.00	10670.0000	0.4945 (ppm)
Co (228.615 nm)	0.4878	ppm	0.0069	1.41	6299.0000	0.4878 (ppm)
Cr (205.560 nm)	0.4901	ppm	0.0012	0.24	2176.0000	0.4901 (ppm)
Cu (324.754 nm)	0.4874	ppm	0.0010	0.21	19200.0000	0.4874 (ppm)
Fe (238.204 nm)	0.4832	ppm	0.0034	0.71	1163.0000	0.4832 (ppm)
K (766.491 nm)	4.8840	ppm	0.1419	2.91	4855.0000	4.8840 (ppm)
Li (670.783 nm)	0.4864	ppm	0.0038	0.77	27770.0000	0.4864 (ppm)
Mg (279.078 nm)	2.4970	ppm	0.0031	0.12	6754.0000	2.4970 (ppm)
Mn (259.372 nm)	0.4916	ppm	0.0002	0.04	45710.0000	0.4916 (ppm)
Mo (204.598 nm)	0.4533	ppm	0.0002	0.04	1745.0000	0.4533 (ppm)
Na (589.592 nm)	4.7770	ppm	0.0145	0.30	26120.0000	4.7770 (ppm)
Ni (231.604 nm)	0.4939	ppm	0.0012	0.25	2155.0000	0.4939 (ppm)
P (213.618 nm)	0.4861	ppm	0.0051	1.06	345.9000	0.4861 (ppm)
Pb (220.353 nm)	0.4903	ppm	0.0049	1.00	976.7000	0.4903 (ppm)
Sb (206.834 nm)	0.5119	ppm	0.0029	0.56	451.0000	0.5119 (ppm)
Se (196.026 nm)	0.4889	ppm	0.0053	1.09	301.5000	0.4889 (ppm)
Si (251.611 nm)	2.4250	ppm	0.0112	0.46	5124.0000	2.4250 (ppm)
Sn (189.925 nm)	0.4165	ppm	0.0024	0.58	239.9000	0.4165 (ppm)
Sr (421.552 nm)	0.4861	ppm	0.0046	0.95	168100.0000	0.4861 (ppm)
Ti (336.122 nm)	0.4740	ppm	0.0053	1.11	47430.0000	0.4740 (ppm)
Tl (190.794 nm)	0.4920	ppm	0.0036	0.73	535.7000	0.4920 (ppm)
V (292.401 nm)	0.4905	ppm	0.0013	0.26	14950.0000	0.4905 (ppm)
W (207.912 nm)	0.4519	ppm	0.0025	0.56	735.8000	0.4519 (ppm)
Zn (202.548 nm)	0.5081	ppm	0.0014	0.28	7880.0000	0.5081 (ppm)
Zr (343.823 nm)	0.4287	ppm	0.0147	3.44	35480.0000	0.4287 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9796	370800.0000	0.0034	0.35
Y_R 371.029	0.9785	49630.0000	0.0012	0.12

Sample Name: 440-259110-A-1-A

Date: 1/15/2020 5:58:36 PM

Rack:Tube: 2:15

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0006 u	ppm	0.0003	44.90	17.3200	-0.0006 u (ppm)
Al (396.152 nm)	0.4815	ppm	0.0009	0.18	14310.0000	0.4815 (ppm)
As (188.980 nm)	0.0403	ppm	0.0025	6.17	23.0200	0.0403 (ppm)
B (249.678 nm)	0.4509	ppm	0.0007	0.15	4802.0000	0.4509 (ppm)
Ba (233.527 nm)	0.2264	ppm	0.0017	0.74	19400.0000	0.2264 (ppm)
Be (234.861 nm)	0.0002	ppm	0.0001	38.95	64.6800	0.0002 (ppm)
Ca (422.673 nm)	29.6300	ppm	0.0821	0.28	115600.0000	29.6300 (ppm)
Cd (214.439 nm)	0.0002	ppm	0.0000	5.59	-1.9870	0.0002 (ppm)
Co (228.615 nm)	0.0011	ppm	0.0009	78.47	6.8420	0.0011 (ppm)
Cr (205.560 nm)	0.0025	ppm	0.0001	3.84	11.8600	0.0025 (ppm)
Cu (324.754 nm)	0.0046	ppm	0.0001	1.45	291.8000	0.0046 (ppm)
Fe (238.204 nm)	0.7169	ppm	0.0103	1.43	1755.0000	0.7169 (ppm)
K (766.491 nm)	3.9160	ppm	0.1042	2.66	3869.0000	3.9160 (ppm)
Li (670.783 nm)	0.0308	ppm	0.0006	1.81	1935.0000	0.0308 (ppm)
Mg (279.078 nm)	7.4060	ppm	0.0518	0.70	20010.0000	7.4060 (ppm)
Mn (259.372 nm)	0.0916	ppm	0.0003	0.33	8623.0000	0.0916 (ppm)
Mo (204.598 nm)	0.0221	ppm	0.0009	4.05	83.6500	0.0221 (ppm)
Na (589.592 nm)	119.8000	ppm	0.2370	0.20	632700.0000	119.8000 (ppm)
Ni (231.604 nm)	0.0108	ppm	0.0008	7.54	35.0500	0.0108 (ppm)
P (213.618 nm)	0.8354	ppm	0.0054	0.65	626.5000	0.8354 (ppm)
Pb (220.353 nm)	0.0020 u	ppm	0.0032	> 100.00	12.6300	0.0020 u (ppm)
Sb (206.834 nm)	0.0076	ppm	0.0029	38.88	8.9850	0.0076 (ppm)
Se (196.026 nm)	0.5735	ppm	0.0054	0.94	350.8000	0.5735 (ppm)
Si (251.611 nm)	5.4990	ppm	0.0442	0.80	11460.0000	5.4990 (ppm)
Sn (189.925 nm)	0.0073	ppm	0.0071	97.77	3.8790	0.0073 (ppm)
Sr (421.552 nm)	0.7296	ppm	0.0018	0.25	252600.0000	0.7296 (ppm)
Ti (336.122 nm)	0.0057	ppm	0.0005	8.19	392.4000	0.0057 (ppm)
Tl (190.794 nm)	0.0038	ppm	0.0023	58.83	9.6610	0.0038 (ppm)
V (292.401 nm)	0.0046	ppm	0.0000	0.08	246.9000	0.0046 (ppm)
W (207.912 nm)	0.0106	ppm	0.0026	24.18	11.9200	0.0106 (ppm)
Zn (202.548 nm)	0.0681	ppm	0.0002	0.36	1051.0000	0.0681 (ppm)
Zr (343.823 nm)	0.0053	ppm	0.0005	8.74	1237.0000	0.0053 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9487	359100.0000	0.0024	0.25
Y_R 371.029	0.9566	48520.0000	0.0059	0.61

Sample Name: 440-259110-A-1-B MS

Date: 1/15/2020 6:00:48 PM

Rack:Tube: 2:16

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.2563	ppm	0.0000	0.01	10370.0000	0.2563 (ppm)
Al (396.152 nm)	1.0660	ppm	0.0021	0.20	32600.0000	1.0660 (ppm)
As (188.980 nm)	0.5740	ppm	0.0071	1.23	343.9000	0.5740 (ppm)
B (249.678 nm)	0.9768	ppm	0.0045	0.46	10370.0000	0.9768 (ppm)
Ba (233.527 nm)	0.7326	ppm	0.0035	0.48	62650.0000	0.7326 (ppm)
Be (234.861 nm)	0.5309	ppm	0.0010	0.19	83320.0000	0.5309 (ppm)
Ca (422.673 nm)	32.3200	ppm	0.0586	0.18	126100.0000	32.3200 (ppm)
Cd (214.439 nm)	0.5120	ppm	0.0006	0.12	11050.0000	0.5120 (ppm)
Co (228.615 nm)	0.5144	ppm	0.0040	0.78	6643.0000	0.5144 (ppm)
Cr (205.560 nm)	0.5164	ppm	0.0028	0.54	2293.0000	0.5164 (ppm)
Cu (324.754 nm)	0.5564	ppm	0.0009	0.17	21880.0000	0.5564 (ppm)
Fe (238.204 nm)	1.2320	ppm	0.0038	0.31	3055.0000	1.2320 (ppm)
K (766.491 nm)	8.9590	ppm	0.0263	0.29	9013.0000	8.9590 (ppm)
Li (670.783 nm)	0.5413	ppm	0.0009	0.17	30940.0000	0.5413 (ppm)
Mg (279.078 nm)	9.9630	ppm	0.0505	0.51	26910.0000	9.9630 (ppm)
Mn (259.372 nm)	0.6072	ppm	0.0009	0.15	56530.0000	0.6072 (ppm)
Mo (204.598 nm)	0.5316	ppm	0.0024	0.45	2047.0000	0.5316 (ppm)
Na (589.592 nm)	125.0000	ppm	0.3611	0.29	659800.0000	125.0000 (ppm)
Ni (231.604 nm)	0.5206	ppm	0.0017	0.33	2272.0000	0.5206 (ppm)
P (213.618 nm)	1.4090	ppm	0.0053	0.38	1031.0000	1.4090 (ppm)
Pb (220.353 nm)	0.5166	ppm	0.0008	0.15	1029.0000	0.5166 (ppm)
Sb (206.834 nm)	0.5178	ppm	0.0020	0.39	455.2000	0.5178 (ppm)
Se (196.026 nm)	1.1270	ppm	0.0042	0.38	690.7000	1.1270 (ppm)
Si (251.611 nm)	6.9300	ppm	0.0150	0.22	14520.0000	6.9300 (ppm)
Sn (189.925 nm)	0.5005	ppm	0.0007	0.14	288.5000	0.5005 (ppm)
Sr (421.552 nm)	1.2480	ppm	0.0015	0.12	431800.0000	1.2480 (ppm)
Ti (336.122 nm)	0.5287	ppm	0.0032	0.60	52900.0000	0.5287 (ppm)
Tl (190.794 nm)	0.5234	ppm	0.0049	0.94	568.9000	0.5234 (ppm)
V (292.401 nm)	0.5395	ppm	0.0013	0.25	16470.0000	0.5395 (ppm)
W (207.912 nm)	0.5230	ppm	0.0019	0.36	852.3000	0.5230 (ppm)
Zn (202.548 nm)	0.6003	ppm	0.0005	0.08	9303.0000	0.6003 (ppm)
Zr (343.823 nm)	0.5192	ppm	0.0070	1.35	42790.0000	0.5192 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9439	357300.0000	0.0021	0.22
Y_R 371.029	0.9607	48730.0000	0.0061	0.64

Sample Name: 440-259110-A-1-C MSD

Date: 1/15/2020 6:03:00 PM

Rack:Tube: 2:17

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.2537	ppm	0.0003	0.11	10260.0000	0.2537 (ppm)
Al (396.152 nm)	1.0540	ppm	0.0001	0.01	32230.0000	1.0540 (ppm)
As (188.980 nm)	0.5652	ppm	0.0018	0.32	338.6000	0.5652 (ppm)
B (249.678 nm)	0.9685	ppm	0.0037	0.38	10280.0000	0.9685 (ppm)
Ba (233.527 nm)	0.7284	ppm	0.0043	0.60	62290.0000	0.7284 (ppm)
Be (234.861 nm)	0.5263	ppm	0.0008	0.15	82600.0000	0.5263 (ppm)
Ca (422.673 nm)	32.2200	ppm	0.1046	0.32	125700.0000	32.2200 (ppm)
Cd (214.439 nm)	0.5073	ppm	0.0018	0.36	10950.0000	0.5073 (ppm)
Co (228.615 nm)	0.5164	ppm	0.0006	0.11	6669.0000	0.5164 (ppm)
Cr (205.560 nm)	0.5135	ppm	0.0016	0.31	2280.0000	0.5135 (ppm)
Cu (324.754 nm)	0.5502	ppm	0.0002	0.04	21630.0000	0.5502 (ppm)
Fe (238.204 nm)	1.2330	ppm	0.0010	0.08	3056.0000	1.2330 (ppm)
K (766.491 nm)	8.9540	ppm	0.0445	0.50	9008.0000	8.9540 (ppm)
Li (670.783 nm)	0.5385	ppm	0.0039	0.73	30780.0000	0.5385 (ppm)
Mg (279.078 nm)	9.9160	ppm	0.0528	0.53	26780.0000	9.9160 (ppm)
Mn (259.372 nm)	0.6018	ppm	0.0008	0.13	56030.0000	0.6018 (ppm)
Mo (204.598 nm)	0.5385	ppm	0.0004	0.07	2073.0000	0.5385 (ppm)
Na (589.592 nm)	125.2000	ppm	0.5764	0.46	661000.0000	125.2000 (ppm)
Ni (231.604 nm)	0.5139	ppm	0.0018	0.35	2242.0000	0.5139 (ppm)
P (213.618 nm)	1.3900	ppm	0.0082	0.59	1017.0000	1.3900 (ppm)
Pb (220.353 nm)	0.5070	ppm	0.0009	0.18	1009.0000	0.5070 (ppm)
Sb (206.834 nm)	0.5152	ppm	0.0050	0.98	452.7000	0.5152 (ppm)
Se (196.026 nm)	1.1100	ppm	0.0034	0.31	680.1000	1.1100 (ppm)
Si (251.611 nm)	6.9200	ppm	0.0143	0.21	14500.0000	6.9200 (ppm)
Sn (189.925 nm)	0.4964	ppm	0.0011	0.22	286.1000	0.4964 (ppm)
Sr (421.552 nm)	1.2410	ppm	0.0035	0.28	429500.0000	1.2410 (ppm)
Ti (336.122 nm)	0.5297	ppm	0.0020	0.37	53000.0000	0.5297 (ppm)
Tl (190.794 nm)	0.5181	ppm	0.0059	1.14	563.2000	0.5181 (ppm)
V (292.401 nm)	0.5339	ppm	0.0002	0.04	16290.0000	0.5339 (ppm)
W (207.912 nm)	0.5282	ppm	0.0038	0.72	860.7000	0.5282 (ppm)
Zn (202.548 nm)	0.5972	ppm	0.0015	0.24	9253.0000	0.5972 (ppm)
Zr (343.823 nm)	0.5183	ppm	0.0040	0.77	42730.0000	0.5183 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9426	356800.0000	0.0003	0.03
Y_R 371.029	0.9572	48550.0000	0.0057	0.60

Sample Name: 440-259110-A-2-A

Date: 1/15/2020 6:05:12 PM

Rack:Tube: 2:18

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0004 u	ppm	0.0002	44.67	25.8300	-0.0004 u (ppm)
Al (396.152 nm)	0.0793	ppm	0.0005	0.65	2108.0000	0.0793 (ppm)
As (188.980 nm)	0.0111	ppm	0.0037	33.57	5.1800	0.0111 (ppm)
B (249.678 nm)	0.4357	ppm	0.0000	0.00	4638.0000	0.4357 (ppm)
Ba (233.527 nm)	0.1825	ppm	0.0010	0.56	15660.0000	0.1825 (ppm)
Be (234.861 nm)	0.0004	ppm	0.0001	38.65	106.7000	0.0004 (ppm)
Ca (422.673 nm)	28.3500	ppm	0.0522	0.18	110600.0000	28.3500 (ppm)
Cd (214.439 nm)	0.0003	ppm	0.0001	17.20	0.5272	0.0003 (ppm)
Co (228.615 nm)	0.0027	ppm	0.0008	30.59	27.4800	0.0027 (ppm)
Cr (205.560 nm)	0.0012	ppm	0.0003	22.89	6.1450	0.0012 (ppm)
Cu (324.754 nm)	0.0023	ppm	0.0003	11.18	204.5000	0.0023 (ppm)
Fe (238.204 nm)	2.2900	ppm	0.0040	0.17	5725.0000	2.2900 (ppm)
K (766.491 nm)	3.5940	ppm	0.0695	1.93	3541.0000	3.5940 (ppm)
Li (670.783 nm)	0.0285	ppm	0.0016	5.51	1795.0000	0.0285 (ppm)
Mg (279.078 nm)	7.1480	ppm	0.0309	0.43	19310.0000	7.1480 (ppm)
Mn (259.372 nm)	0.0966	ppm	0.0000	0.03	9252.0000	0.0966 (ppm)
Mo (204.598 nm)	0.0129	ppm	0.0013	10.29	47.8400	0.0129 (ppm)
Na (589.592 nm)	115.1000	ppm	0.4302	0.37	607800.0000	115.1000 (ppm)
Ni (231.604 nm)	0.0400	ppm	0.0012	2.92	163.0000	0.0400 (ppm)
P (213.618 nm)	0.2054	ppm	0.0023	1.13	156.9000	0.2054 (ppm)
Pb (220.353 nm)	0.0042	ppm	0.0002	5.22	16.4100	0.0042 (ppm)
Sb (206.834 nm)	0.0103	ppm	0.0012	11.36	11.5400	0.0103 (ppm)
Se (196.026 nm)	0.3028	ppm	0.0058	1.91	185.4000	0.3028 (ppm)
Si (251.611 nm)	5.2500	ppm	0.0172	0.33	10940.0000	5.2500 (ppm)
Sn (189.925 nm)	0.0004	ppm	0.0003	66.22	-0.1075	0.0004 (ppm)
Sr (421.552 nm)	0.6818	ppm	0.0018	0.26	236000.0000	0.6818 (ppm)
Ti (336.122 nm)	0.0052	ppm	0.0006	12.15	340.2000	0.0052 (ppm)
Tl (190.794 nm)	0.0037	ppm	0.0018	47.36	9.3840	0.0037 (ppm)
V (292.401 nm)	0.0175	ppm	0.0002	1.01	638.7000	0.0175 (ppm)
W (207.912 nm)	0.0053	ppm	0.0007	12.23	2.8580	0.0053 (ppm)
Zn (202.548 nm)	0.0367	ppm	0.0001	0.28	566.5000	0.0367 (ppm)
Zr (343.823 nm)	0.0098	ppm	0.0010	10.36	1567.0000	0.0098 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9435	357100.0000	0.0052	0.55
Y_R 371.029	0.9552	48450.0000	0.0013	0.14

Sample Name: 440-259110-A-3-A

Date: 1/15/2020 6:07:24 PM

Rack:Tube: 2:19

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0012 u	ppm	0.0004	31.95	-14.3700	-0.0012 u (ppm)
Al (396.152 nm)	0.3096	ppm	0.0007	0.23	9158.0000	0.3096 (ppm)
As (188.980 nm)	0.0124	ppm	0.0018	14.26	5.5830	0.0124 (ppm)
B (249.678 nm)	0.4448	ppm	0.0003	0.06	4736.0000	0.4448 (ppm)
Ba (233.527 nm)	0.1166	ppm	0.0010	0.83	10030.0000	0.1166 (ppm)
Be (234.861 nm)	0.0001	ppm	0.0000	26.76	62.6700	0.0001 (ppm)
Ca (422.673 nm)	121.2000	ppm	1.2780	1.05	472800.0000	121.2000 (ppm)
Cd (214.439 nm)	0.0003	ppm	0.0004	> 100.00	0.8676	0.0003 (ppm)
Co (228.615 nm)	0.0015	ppm	0.0007	48.24	12.9700	0.0015 (ppm)
Cr (205.560 nm)	0.0023	ppm	0.0013	57.97	12.7300	0.0023 (ppm)
Cu (324.754 nm)	0.0057	ppm	0.0002	3.30	270.6000	0.0057 (ppm)
Fe (238.204 nm)	2.3610	ppm	0.0141	0.60	5907.0000	2.3610 (ppm)
K (766.491 nm)	10.0100	ppm	0.1728	1.73	10100.0000	10.0100 (ppm)
Li (670.783 nm)	0.0423	ppm	0.0018	4.36	2705.0000	0.0423 (ppm)
Mg (279.078 nm)	32.0600	ppm	0.3229	1.01	86570.0000	32.0600 (ppm)
Mn (259.372 nm)	0.0743	ppm	0.0001	0.17	7290.0000	0.0743 (ppm)
Mo (204.598 nm)	0.0136	ppm	0.0010	7.69	50.9800	0.0136 (ppm)
Na (589.592 nm)	687.4000 o	ppm	2.1470	0.31	3625000.0000	687.4000 o (ppm)
Ni (231.604 nm)	0.0019	ppm	0.0003	17.00	-5.4900	0.0019 (ppm)
P (213.618 nm)	1.0560	ppm	0.0108	1.02	790.5000	1.0560 (ppm)
Pb (220.353 nm)	0.0040	ppm	0.0023	57.68	17.0400	0.0040 (ppm)
Sb (206.834 nm)	0.0032	ppm	0.0014	43.42	5.5770	0.0032 (ppm)
Se (196.026 nm)	0.1007	ppm	0.0113	11.25	61.8300	0.1007 (ppm)
Si (251.611 nm)	13.6000	ppm	0.0005	0.00	28350.0000	13.6000 (ppm)
Sn (189.925 nm)	-0.0002 u	ppm	0.0042	> 100.00	-0.3478	-0.0002 u (ppm)
Sr (421.552 nm)	1.4640	ppm	0.0059	0.40	507600.0000	1.4640 (ppm)
Ti (336.122 nm)	0.0072	ppm	0.0002	2.84	468.1000	0.0072 (ppm)
Tl (190.794 nm)	0.0052	ppm	0.0027	50.58	10.6900	0.0052 (ppm)
V (292.401 nm)	0.0100	ppm	0.0004	4.09	523.7000	0.0100 (ppm)
W (207.912 nm)	0.0031	ppm	0.0007	22.26	21.2200	0.0031 (ppm)
Zn (202.548 nm)	1.7820	ppm	0.0011	0.06	27420.0000	1.7820 (ppm)
Zr (343.823 nm)	0.0108	ppm	0.0011	10.49	1662.0000	0.0108 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.8753	331300.0000	0.0018	0.21
Y_R 371.029	0.9163	46480.0000	0.0079	0.86

Sample Name: 440-259110-A-4-A

Date: 1/15/2020 6:09:37 PM

Rack:Tube: 2:20

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0007 u	ppm	0.0004	59.48	14.4200	-0.0007 u (ppm)
Al (396.152 nm)	0.5371	ppm	0.0007	0.13	15980.0000	0.5371 (ppm)
As (188.980 nm)	0.0356	ppm	0.0044	12.29	20.1700	0.0356 (ppm)
B (249.678 nm)	0.4505	ppm	0.0007	0.16	4798.0000	0.4505 (ppm)
Ba (233.527 nm)	0.2737	ppm	0.0026	0.94	23440.0000	0.2737 (ppm)
Be (234.861 nm)	0.0000	ppm	0.0000	> 100.00	32.9200	0.0000 (ppm)
Ca (422.673 nm)	28.1900	ppm	0.1835	0.65	110000.0000	28.1900 (ppm)
Cd (214.439 nm)	-0.0001 u	ppm	0.0002	> 100.00	-7.7630	-0.0001 u (ppm)
Co (228.615 nm)	0.0016	ppm	0.0003	21.47	12.6400	0.0016 (ppm)
Cr (205.560 nm)	0.0016	ppm	0.0002	13.40	8.1860	0.0016 (ppm)
Cu (324.754 nm)	0.0055	ppm	0.0008	14.49	329.2000	0.0055 (ppm)
Fe (238.204 nm)	0.8473	ppm	0.0084	0.99	2084.0000	0.8473 (ppm)
K (766.491 nm)	3.8390	ppm	0.0617	1.61	3791.0000	3.8390 (ppm)
Li (670.783 nm)	0.0314	ppm	0.0006	1.78	1967.0000	0.0314 (ppm)
Mg (279.078 nm)	6.9400	ppm	0.0730	1.05	18750.0000	6.9400 (ppm)
Mn (259.372 nm)	0.0923	ppm	0.0001	0.11	8690.0000	0.0923 (ppm)
Mo (204.598 nm)	0.0134	ppm	0.0012	9.05	49.8900	0.0134 (ppm)
Na (589.592 nm)	120.1000	ppm	0.8940	0.74	634300.0000	120.1000 (ppm)
Ni (231.604 nm)	0.0053	ppm	0.0010	19.18	10.9800	0.0053 (ppm)
P (213.618 nm)	0.6977	ppm	0.0021	0.30	523.9000	0.6977 (ppm)
Pb (220.353 nm)	0.0018	ppm	0.0003	17.90	12.1300	0.0018 (ppm)
Sb (206.834 nm)	0.0078	ppm	0.0071	90.71	9.3270	0.0078 (ppm)
Se (196.026 nm)	0.6849	ppm	0.0093	1.35	418.6000	0.6849 (ppm)
Si (251.611 nm)	5.1890	ppm	0.0160	0.31	10810.0000	5.1890 (ppm)
Sn (189.925 nm)	0.0005 u	ppm	0.0058	> 100.00	-0.0164	0.0005 u (ppm)
Sr (421.552 nm)	0.7473	ppm	0.0048	0.65	258700.0000	0.7473 (ppm)
Ti (336.122 nm)	0.0027	ppm	0.0002	8.17	95.2300	0.0027 (ppm)
Tl (190.794 nm)	0.0030	ppm	0.0014	45.33	8.7820	0.0030 (ppm)
V (292.401 nm)	0.0052	ppm	0.0001	2.80	262.9000	0.0052 (ppm)
W (207.912 nm)	0.0050	ppm	0.0005	9.08	2.7500	0.0050 (ppm)
Zn (202.548 nm)	0.0704	ppm	0.0004	0.61	1087.0000	0.0704 (ppm)
Zr (343.823 nm)	0.0034	ppm	0.0004	12.86	1074.0000	0.0034 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9421	356600.0000	0.0001	0.01
Y_R 371.029	0.9543	48400.0000	0.0097	1.02

Sample Name: 440-259110-A-5-A

Date: 1/15/2020 6:11:48 PM

Rack:Tube: 2:21

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0006 u	ppm	0.0003	53.15	19.3700	-0.0006 u (ppm)
Al (396.152 nm)	0.0558	ppm	0.0000	0.08	1393.0000	0.0558 (ppm)
As (188.980 nm)	0.0064	ppm	0.0019	29.88	2.4390	0.0064 (ppm)
B (249.678 nm)	0.4394	ppm	0.0013	0.29	4679.0000	0.4394 (ppm)
Ba (233.527 nm)	0.1795	ppm	0.0003	0.17	15400.0000	0.1795 (ppm)
Be (234.861 nm)	0.0000 u	ppm	0.0000	> 100.00	32.2500	0.0000 u (ppm)
Ca (422.673 nm)	29.0100	ppm	0.0610	0.21	113200.0000	29.0100 (ppm)
Cd (214.439 nm)	-0.0002 u	ppm	0.0001	56.40	-11.2000	-0.0002 u (ppm)
Co (228.615 nm)	0.0024	ppm	0.0001	2.78	23.4000	0.0024 (ppm)
Cr (205.560 nm)	0.0002 u	ppm	0.0004	> 100.00	1.9330	0.0002 u (ppm)
Cu (324.754 nm)	0.0012	ppm	0.0003	24.91	159.2000	0.0012 (ppm)
Fe (238.204 nm)	1.0320	ppm	0.0027	0.26	2549.0000	1.0320 (ppm)
K (766.491 nm)	3.8460	ppm	0.0296	0.77	3797.0000	3.8460 (ppm)
Li (670.783 nm)	0.0297	ppm	0.0015	5.11	1875.0000	0.0297 (ppm)
Mg (279.078 nm)	7.4110	ppm	0.0000	0.00	20020.0000	7.4110 (ppm)
Mn (259.372 nm)	0.0897	ppm	0.0002	0.28	8476.0000	0.0897 (ppm)
Mo (204.598 nm)	0.0066	ppm	0.0009	13.44	23.5600	0.0066 (ppm)
Na (589.592 nm)	117.2000	ppm	0.6710	0.57	619000.0000	117.2000 (ppm)
Ni (231.604 nm)	0.0040	ppm	0.0037	94.52	4.9170	0.0040 (ppm)
P (213.618 nm)	0.1699	ppm	0.0045	2.67	130.4000	0.1699 (ppm)
Pb (220.353 nm)	-0.0014 u	ppm	0.0015	> 100.00	5.9030	-0.0014 u (ppm)
Sb (206.834 nm)	0.0038	ppm	0.0044	> 100.00	5.8470	0.0038 (ppm)
Se (196.026 nm)	0.3125	ppm	0.0109	3.47	191.6000	0.3125 (ppm)
Si (251.611 nm)	5.1410	ppm	0.0163	0.32	10710.0000	5.1410 (ppm)
Sn (189.925 nm)	-0.0005 u	ppm	0.0001	20.56	-0.6114	-0.0005 u (ppm)
Sr (421.552 nm)	0.7178	ppm	0.0015	0.21	248500.0000	0.7178 (ppm)
Ti (336.122 nm)	0.0013	ppm	0.0002	17.67	-47.3200	0.0013 (ppm)
Tl (190.794 nm)	0.0031	ppm	0.0002	6.83	8.7150	0.0031 (ppm)
V (292.401 nm)	0.0130	ppm	0.0001	0.54	506.2000	0.0130 (ppm)
W (207.912 nm)	0.0034	ppm	0.0009	26.02	-0.3714	0.0034 (ppm)
Zn (202.548 nm)	0.0262	ppm	0.0001	0.27	405.6000	0.0262 (ppm)
Zr (343.823 nm)	0.0046	ppm	0.0003	7.09	1172.0000	0.0046 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9384	355200.0000	0.0003	0.04
Y_R 371.029	0.9535	48360.0000	0.0024	0.25

Sample Name: 440-258650-E-1-A

Date: 1/15/2020 6:14:00 PM

Rack:Tube: 2:22

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0011 u	ppm	0.0001	6.18	-1.8840	-0.0011 u (ppm)
Al (396.152 nm)	0.0168	ppm	0.0001	0.65	245.4000	0.0168 (ppm)
As (188.980 nm)	0.0053	ppm	0.0002	3.30	1.6620	0.0053 (ppm)
B (249.678 nm)	0.0155	ppm	0.0003	1.63	154.0000	0.0155 (ppm)
Ba (233.527 nm)	0.0115	ppm	0.0001	0.67	1047.0000	0.0115 (ppm)
Be (234.861 nm)	0.0000 u	ppm	0.0000	> 100.00	21.7700	0.0000 u (ppm)
Ca (422.673 nm)	63.5700	ppm	0.0754	0.12	247900.0000	63.5700 (ppm)
Cd (214.439 nm)	0.0002	ppm	0.0002	98.36	-1.2940	0.0002 (ppm)
Co (228.615 nm)	-0.0004 u	ppm	0.0005	> 100.00	-11.9200	-0.0004 u (ppm)
Cr (205.560 nm)	-0.0003 u	ppm	0.0009	> 100.00	0.0911	-0.0003 u (ppm)
Cu (324.754 nm)	0.0056	ppm	0.0005	9.32	309.6000	0.0056 (ppm)
Fe (238.204 nm)	0.2110	ppm	0.0023	1.10	478.9000	0.2110 (ppm)
K (766.491 nm)	3.3220	ppm	0.1084	3.26	3272.0000	3.3220 (ppm)
Li (670.783 nm)	-0.0005 u	ppm	0.0013	> 100.00	257.9000	-0.0005 u (ppm)
Mg (279.078 nm)	25.8100	ppm	0.0044	0.02	69700.0000	25.8100 (ppm)
Mn (259.372 nm)	0.0032	ppm	0.0001	3.52	452.8000	0.0032 (ppm)
Mo (204.598 nm)	0.0015	ppm	0.0001	4.79	4.2430	0.0015 (ppm)
Na (589.592 nm)	26.7000	ppm	0.0438	0.16	141700.0000	26.7000 (ppm)
Ni (231.604 nm)	-0.0014 u	ppm	0.0006	46.68	-19.0000	-0.0014 u (ppm)
P (213.618 nm)	-0.0006 u	ppm	0.0054	> 100.00	2.9680	-0.0006 u (ppm)
Pb (220.353 nm)	0.0036	ppm	0.0007	18.97	16.5800	0.0036 (ppm)
Sb (206.834 nm)	-0.0011 u	ppm	0.0091	> 100.00	1.7460	-0.0011 u (ppm)
Se (196.026 nm)	0.0037 u	ppm	0.0130	> 100.00	3.4020	0.0037 u (ppm)
Si (251.611 nm)	23.8800	ppm	0.0834	0.35	49740.0000	23.8800 (ppm)
Sn (189.925 nm)	-0.0006 u	ppm	0.0028	> 100.00	-0.6626	-0.0006 u (ppm)
Sr (421.552 nm)	0.2616	ppm	0.0003	0.11	91100.0000	0.2616 (ppm)
Ti (336.122 nm)	0.0001 u	ppm	0.0001	> 100.00	-201.3000	0.0001 u (ppm)
Tl (190.794 nm)	0.0041	ppm	0.0029	71.41	9.8750	0.0041 (ppm)
V (292.401 nm)	-0.0012 u	ppm	0.0001	11.86	113.5000	-0.0012 u (ppm)
W (207.912 nm)	0.0024	ppm	0.0017	70.87	-2.6120	0.0024 (ppm)
Zn (202.548 nm)	0.0247	ppm	0.0001	0.57	380.3000	0.0247 (ppm)
Zr (343.823 nm)	0.0012	ppm	0.0000	1.02	914.1000	0.0012 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9399	355800.0000	0.0015	0.16
Y_R 371.029	0.9469	48030.0000	0.0016	0.17

Sample Name: CCV 6043773

Date: 1/15/2020 6:16:12 PM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.4977	ppm	0.0008	0.16	20090.0000	0.4977 (ppm)
Al (396.152 nm)	0.9875	ppm	0.0003	0.03	30710.0000	0.9875 (ppm)
As (188.980 nm)	0.9949	ppm	0.0029	0.29	596.6000	0.9949 (ppm)
B (249.678 nm)	0.9912	ppm	0.0045	0.45	10480.0000	0.9912 (ppm)
Ba (233.527 nm)	1.0020	ppm	0.0077	0.77	85670.0000	1.0020 (ppm)
Be (234.861 nm)	0.9979	ppm	0.0011	0.11	156600.0000	0.9979 (ppm)
Ca (422.673 nm)	4.9750	ppm	0.0086	0.17	19480.0000	4.9750 (ppm)
Cd (214.439 nm)	0.9993	ppm	0.0010	0.10	21570.0000	0.9993 (ppm)
Co (228.615 nm)	0.9932	ppm	0.0012	0.12	12830.0000	0.9932 (ppm)
Cr (205.560 nm)	0.9951	ppm	0.0004	0.04	4417.0000	0.9951 (ppm)
Cu (324.754 nm)	1.0020	ppm	0.0013	0.13	39350.0000	1.0020 (ppm)
Fe (238.204 nm)	1.0020	ppm	0.0040	0.40	2472.0000	1.0020 (ppm)
K (766.491 nm)	9.8660	ppm	0.0032	0.03	9937.0000	9.8660 (ppm)
Li (670.783 nm)	0.9958	ppm	0.0002	0.02	56710.0000	0.9958 (ppm)
Mg (279.078 nm)	5.0630	ppm	0.0567	1.12	13680.0000	5.0630 (ppm)
Mn (259.372 nm)	0.9944	ppm	0.0014	0.14	92440.0000	0.9944 (ppm)
Mo (204.598 nm)	0.9941	ppm	0.0010	0.10	3829.0000	0.9941 (ppm)
Na (589.592 nm)	10.0800	ppm	0.0284	0.28	54100.0000	10.0800 (ppm)
Ni (231.604 nm)	0.9952	ppm	0.0006	0.06	4354.0000	0.9952 (ppm)
P (213.618 nm)	1.0020	ppm	0.0068	0.68	707.9000	1.0020 (ppm)
Pb (220.353 nm)	0.9960	ppm	0.0014	0.14	1975.0000	0.9960 (ppm)
Sb (206.834 nm)	1.0110	ppm	0.0191	1.89	886.4000	1.0110 (ppm)
Se (196.026 nm)	0.9977	ppm	0.0084	0.84	614.1000	0.9977 (ppm)
Si (251.611 nm)	5.1020	ppm	0.0413	0.81	10790.0000	5.1020 (ppm)
Sn (189.925 nm)	0.9972	ppm	0.0054	0.54	575.0000	0.9972 (ppm)
Sr (421.552 nm)	0.9913	ppm	0.0018	0.18	342800.0000	0.9913 (ppm)
Ti (336.122 nm)	1.0080	ppm	0.0035	0.35	101000.0000	1.0080 (ppm)
Tl (190.794 nm)	0.9972	ppm	0.0047	0.48	1080.0000	0.9972 (ppm)
V (292.401 nm)	0.9973	ppm	0.0011	0.11	30310.0000	0.9973 (ppm)
W (207.912 nm)	0.9995	ppm	0.0014	0.14	1633.0000	0.9995 (ppm)
Zn (202.548 nm)	1.0020	ppm	0.0006	0.06	15530.0000	1.0020 (ppm)
Zr (343.823 nm)	1.0010	ppm	0.0018	0.18	81800.0000	1.0010 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9516	360200.0000	0.0006	0.07
Y_R 371.029	0.9549	48430.0000	0.0085	0.89

Sample Name: CCB 6043772

Date: 1/1/0001 12:00:00 AM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD

Sample Name: MB 440-590699/1-A@5

Date: 1/1/0001 12:00:00 AM

Rack:Tube: 2:28

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD

Sample Name: LCS 440-590699/2-A@5

Date: 1/1/0001 12:00:00 AM

Rack:Tube: 2:29

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD

Sample Name: 440-259135-C-1-A SD@25

Date: 1/1/0001 12:00:00 AM

Rack:Tube: 2:30

Weight (g): 1

Volume (mL): 1

Dilution: 1

**Analyte Results**

Label	Solution Concentration	Unit	SD	%RSD	Intensity

**Internal Standards Results**

Label	Ratio	Intensity	SD	%RSD

Sample Name: 440-259135-C-1-A@5

Date: 1/1/0001 12:00:00 AM

Rack:Tube: 2:31

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD

**Sample Name:** 440-259135-C-1-B MS@5**Date:** 1/1/0001 12:00:00 AM**Rack:Tube:** 2:32**Weight (g):** 1**Volume (mL):** 1**Dilution:** 1**Analyte Results**

Label	Solution Concentration	Unit	SD	%RSD	Intensity

**Internal Standards Results**

Label	Ratio	Intensity	SD	%RSD

Sample Name: 440-259135-C-1-C MSD@5

Date: 1/1/0001 12:00:00 AM

Rack:Tube: 2:33

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD

**Sample Name:** 440-259135-C-1-A PDS@5

Date: 1/1/0001 12:00:00 AM

Rack:Tube: 2:34

Weight (g): 1

Volume (mL): 1

Dilution: 1

**Analyte Results**

Label	Solution Concentration	Unit	SD	%RSD	Intensity

**Internal Standards Results**

Label	Ratio	Intensity	SD	%RSD

Sample Name: CCV 6043773

Date: 1/15/2020 6:18:25 PM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.4956	ppm	0.0015	0.31	20000.0000	0.4956 (ppm)
Al (396.152 nm)	0.9847	ppm	0.0021	0.22	30640.0000	0.9847 (ppm)
As (188.980 nm)	0.9886	ppm	0.0019	0.19	592.8000	0.9886 (ppm)
B (249.678 nm)	0.9897	ppm	0.0034	0.34	10460.0000	0.9897 (ppm)
Ba (233.527 nm)	1.0010	ppm	0.0010	0.10	85560.0000	1.0010 (ppm)
Be (234.861 nm)	0.9955	ppm	0.0026	0.26	156200.0000	0.9955 (ppm)
Ca (422.673 nm)	4.9800	ppm	0.0052	0.10	19490.0000	4.9800 (ppm)
Cd (214.439 nm)	0.9960	ppm	0.0029	0.29	21500.0000	0.9960 (ppm)
Co (228.615 nm)	0.9895	ppm	0.0043	0.44	12790.0000	0.9895 (ppm)
Cr (205.560 nm)	0.9909	ppm	0.0032	0.32	4398.0000	0.9909 (ppm)
Cu (324.754 nm)	0.9983	ppm	0.0086	0.86	39190.0000	0.9983 (ppm)
Fe (238.204 nm)	1.0120	ppm	0.0018	0.18	2497.0000	1.0120 (ppm)
K (766.491 nm)	10.0100	ppm	0.0649	0.65	10090.0000	10.0100 (ppm)
Li (670.783 nm)	0.9970	ppm	0.0048	0.48	56770.0000	0.9970 (ppm)
Mg (279.078 nm)	5.0450	ppm	0.0086	0.17	13630.0000	5.0450 (ppm)
Mn (259.372 nm)	0.9916	ppm	0.0027	0.27	92200.0000	0.9916 (ppm)
Mo (204.598 nm)	1.0160	ppm	0.0009	0.09	3912.0000	1.0160 (ppm)
Na (589.592 nm)	10.0200	ppm	0.0071	0.07	53810.0000	10.0200 (ppm)
Ni (231.604 nm)	0.9917	ppm	0.0004	0.04	4339.0000	0.9917 (ppm)
P (213.618 nm)	0.9947	ppm	0.0103	1.04	702.0000	0.9947 (ppm)
Pb (220.353 nm)	0.9929	ppm	0.0055	0.56	1969.0000	0.9929 (ppm)
Sb (206.834 nm)	1.0240	ppm	0.0092	0.90	897.6000	1.0240 (ppm)
Se (196.026 nm)	0.9960	ppm	0.0023	0.23	613.3000	0.9960 (ppm)
Si (251.611 nm)	5.0710	ppm	0.0577	1.14	10730.0000	5.0710 (ppm)
Sn (189.925 nm)	0.9958	ppm	0.0130	1.31	574.2000	0.9958 (ppm)
Sr (421.552 nm)	0.9913	ppm	0.0014	0.14	342800.0000	0.9913 (ppm)
Ti (336.122 nm)	1.0160	ppm	0.0034	0.33	101900.0000	1.0160 (ppm)
Tl (190.794 nm)	1.0050	ppm	0.0072	0.71	1088.0000	1.0050 (ppm)
V (292.401 nm)	0.9962	ppm	0.0040	0.40	30270.0000	0.9962 (ppm)
W (207.912 nm)	1.0150	ppm	0.0008	0.08	1658.0000	1.0150 (ppm)
Zn (202.548 nm)	0.9981	ppm	0.0024	0.24	15480.0000	0.9981 (ppm)
Zr (343.823 nm)	0.9720	ppm	0.0039	0.40	79430.0000	0.9720 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029

Label	Internal Standard
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

**Internal Standards Results**

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9538	361000.0000	0.0011	0.12
Y_R 371.029	0.9558	48480.0000	0.0030	0.32

Sample Name: CCB 6043772

Date: 1/15/2020 6:20:36 PM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.0002	ppm	0.0001	55.14	54.0800	0.0002 (ppm)
Al (396.152 nm)	0.0006	ppm	0.0005	93.92	-296.9000	0.0006 (ppm)
As (188.980 nm)	0.0016	ppm	0.0018	> 100.00	-0.3367	0.0016 (ppm)
B (249.678 nm)	0.0019	ppm	0.0001	6.40	6.2190	0.0019 (ppm)
Ba (233.527 nm)	0.0006	ppm	0.0003	49.45	108.0000	0.0006 (ppm)
Be (234.861 nm)	0.0006	ppm	0.0002	33.37	111.8000	0.0006 (ppm)
Ca (422.673 nm)	0.0112	ppm	0.0095	84.81	124.1000	0.0112 (ppm)
Cd (214.439 nm)	0.0005	ppm	0.0001	27.04	4.7110	0.0005 (ppm)
Co (228.615 nm)	0.0011	ppm	0.0001	11.26	4.9680	0.0011 (ppm)
Cr (205.560 nm)	0.0000 u	ppm	0.0009	> 100.00	0.3368	0.0000 u (ppm)
Cu (324.754 nm)	0.0012	ppm	0.0006	53.14	179.9000	0.0012 (ppm)
Fe (238.204 nm)	0.0021	ppm	0.0023	> 100.00	-50.2600	0.0021 (ppm)
K (766.491 nm)	-0.0418 u	ppm	0.0634	> 100.00	-168.3000	-0.0418 u (ppm)
Li (670.783 nm)	0.0017	ppm	0.0001	4.52	220.9000	0.0017 (ppm)
Mg (279.078 nm)	0.0069	ppm	0.0045	64.53	32.9000	0.0069 (ppm)
Mn (259.372 nm)	0.0006	ppm	0.0002	37.18	101.1000	0.0006 (ppm)
Mo (204.598 nm)	0.0143	ppm	0.0017	11.98	53.4400	0.0143 (ppm)
Na (589.592 nm)	0.0113	ppm	0.0075	66.66	961.2000	0.0113 (ppm)
Ni (231.604 nm)	0.0021	ppm	0.0005	24.74	-2.7310	0.0021 (ppm)
P (213.618 nm)	-0.0066 u	ppm	0.0058	88.88	-1.0520	-0.0066 u (ppm)
Pb (220.353 nm)	-0.0008 u	ppm	0.0009	> 100.00	6.9990	-0.0008 u (ppm)
Sb (206.834 nm)	0.0037	ppm	0.0011	29.83	5.6460	0.0037 (ppm)
Se (196.026 nm)	0.0092	ppm	0.0018	20.04	7.1860	0.0092 (ppm)
Si (251.611 nm)	0.0266	ppm	0.0015	5.66	56.2400	0.0266 (ppm)
Sn (189.925 nm)	0.0095	ppm	0.0033	35.12	5.1190	0.0095 (ppm)
Sr (421.552 nm)	0.0003	ppm	0.0001	21.39	79.9300	0.0003 (ppm)
Ti (336.122 nm)	0.0053 Z	ppm	0.0005	8.79	375.6000 Z	0.0053 Z (ppm)
Tl (190.794 nm)	0.0015	ppm	0.0003	21.33	7.0960	0.0015 (ppm)
V (292.401 nm)	0.0010	ppm	0.0006	63.75	101.9000	0.0010 (ppm)
W (207.912 nm)	0.0111	ppm	0.0005	4.32	12.1500	0.0111 (ppm)
Zn (202.548 nm)	0.0008	ppm	0.0003	36.23	21.7300	0.0008 (ppm)
Zr (343.823 nm)	0.0007	ppm	0.0000	3.16	872.5000	0.0007 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9686	366600.0000	0.0023	0.24
Y_R 371.029	0.9629	48840.0000	0.0026	0.27

**Sample Name:** 440-259135-C-2-A@5

Date: 1/1/0001 12:00:00 AM

Rack:Tube: 2:35

Weight (g): 1

Volume (mL): 1

Dilution: 1

**Analyte Results**

Label	Solution Concentration	Unit	SD	%RSD	Intensity

**Internal Standards Results**

Label	Ratio	Intensity	SD	%RSD

Sample Name: 440-259135-C-3-A@5

Date: 1/1/0001 12:00:00 AM

Rack:Tube: 2:36

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD

Sample Name: 440-259135-C-4-A@5

Date: 1/1/0001 12:00:00 AM

Rack:Tube: 2:37

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD

**Sample Name:** 440-259135-C-5-A@5

Date: 1/1/0001 12:00:00 AM

Rack:Tube: 2:38

Weight (g): 1

Volume (mL): 1

Dilution: 1

**Analyte Results**

Label	Solution Concentration	Unit	SD	%RSD	Intensity

**Internal Standards Results**

Label	Ratio	Intensity	SD	%RSD

Sample Name: 440-259135-C-6-A@5

Date: 1/1/0001 12:00:00 AM

Rack:Tube: 2:39

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD

**Sample Name:** 440-258676-D-1-H@5

Date: 1/1/0001 12:00:00 AM

Rack:Tube: 2:40

Weight (g): 1

Volume (mL): 1

Dilution: 1

**Analyte Results**

Label	Solution Concentration	Unit	SD	%RSD	Intensity

**Internal Standards Results**

Label	Ratio	Intensity	SD	%RSD

Sample Name: CCV 6043773

Date: 1/15/2020 6:22:35 PM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

**Analyte Results**

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.4936 n	ppm	0.0011	0.23	19920.0000	0.4936 n (ppm)
Al (396.152 nm)	0.9822 n	ppm	0.0047	0.48	30540.0000	0.9822 n (ppm)
As (188.980 nm)	0.9908 n	ppm	0.0001	0.01	594.2000	0.9908 n (ppm)
B (249.678 nm)	0.9857 n	ppm	0.0029	0.30	10420.0000	0.9857 n (ppm)
Ba (233.527 nm)	0.9559 ni	ppm	0.0010	0.11	81720.0000 i	0.9559 ni (ppm)
Be (234.861 nm)	0.9915 n	ppm	0.0040	0.40	155500.0000	0.9915 n (ppm)
Cd (214.439 nm)	0.9916 n	ppm	0.0023	0.23	21400.0000	0.9916 n (ppm)
Co (228.615 nm)	0.9858 n	ppm	0.0034	0.34	12740.0000	0.9858 n (ppm)
Cr (205.560 nm)	0.9875 n	ppm	0.0030	0.30	4383.0000	0.9875 n (ppm)
Cu (324.754 nm)	0.9893 n	ppm	0.0017	0.17	38840.0000	0.9893 n (ppm)
Mg (279.078 nm)	4.8100 ni	ppm	0.0021	0.04	13000.0000 i	4.8100 ni (ppm)
Mn (259.372 nm)	0.9882 n	ppm	0.0038	0.38	91770.0000	0.9882 n (ppm)
Mo (204.598 nm)	0.9982 n	ppm	0.0023	0.23	3845.0000	0.9982 n (ppm)
Ni (231.604 nm)	0.9882 n	ppm	0.0071	0.72	4323.0000	0.9882 n (ppm)
P (213.618 nm)	0.9965 n	ppm	0.0037	0.37	703.9000	0.9965 n (ppm)
Pb (220.353 nm)	0.9891 n	ppm	0.0070	0.70	1962.0000	0.9891 n (ppm)
Sb (206.834 nm)	1.0120 n	ppm	0.0078	0.77	887.9000	1.0120 n (ppm)
Se (196.026 nm)	0.9911 n	ppm	0.0028	0.28	610.4000	0.9911 n (ppm)
Si (251.611 nm)	5.0330 n	ppm	0.0700	1.39	10650.0000	5.0330 n (ppm)
Sn (189.925 nm)	0.9910 n	ppm	0.0044	0.45	571.4000	0.9910 n (ppm)
Ti (336.122 nm)	1.0060 n	ppm	0.0061	0.61	100800.0000	1.0060 n (ppm)
Tl (190.794 nm)	0.9913 n	ppm	0.0100	1.01	1073.0000	0.9913 n (ppm)
V (292.401 nm)	0.9926 n	ppm	0.0062	0.63	30160.0000	0.9926 n (ppm)
W (207.912 nm)	0.9999 n	ppm	0.0043	0.43	1634.0000	0.9999 n (ppm)
Zn (202.548 nm)	0.9950 n	ppm	0.0032	0.32	15430.0000	0.9950 n (ppm)
Zr (343.823 nm)	0.9651 n	ppm	0.0059	0.61	78890.0000	0.9651 n (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029

Label	Internal Standard
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

**Internal Standards Results**

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9569	362200.0000	0.0041	0.43

Sample Name: CCB 6043772

Date: 1/1/0001 12:00:00 AM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

**Analyte Results**

Label	Solution Concentration	Unit	SD	%RSD	Intensity

**Internal Standards Results**

Label	Ratio	Intensity	SD	%RSD

Sample Name: xRINSE 6043786

Date: 1/15/2020 6:25:21 PM

Rack:Tube: S1:8

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.0003	ppm	0.0000	3.26	58.2300	0.0003 (ppm)
Al (396.152 nm)	0.0023	ppm	0.0006	25.74	-236.6000	0.0023 (ppm)
As (188.980 nm)	0.0040	ppm	0.0029	73.45	1.0910	0.0040 (ppm)
B (249.678 nm)	0.0016	ppm	0.0001	3.36	2.2600	0.0016 (ppm)
Ba (233.527 nm)	0.0004	ppm	0.0002	36.40	96.5300	0.0004 (ppm)
Be (234.861 nm)	0.0004	ppm	0.0002	43.05	76.1000	0.0004 (ppm)
Ca (422.673 nm)	0.0010 u	ppm	0.0035	> 100.00	84.3200	0.0010 u (ppm)
Cd (214.439 nm)	0.0003	ppm	0.0001	20.47	-0.7517	0.0003 (ppm)
Co (228.615 nm)	0.0004	ppm	0.0001	20.07	-3.1030	0.0004 (ppm)
Cr (205.560 nm)	0.0001	ppm	0.0000	69.62	0.8007	0.0001 (ppm)
Cu (324.754 nm)	0.0010	ppm	0.0002	17.32	172.9000	0.0010 (ppm)
Fe (238.204 nm)	0.0081	ppm	0.0002	2.91	-35.2800	0.0081 (ppm)
K (766.491 nm)	0.0544	ppm	0.0354	65.05	-70.2900	0.0544 (ppm)
Li (670.783 nm)	-0.0003 u	ppm	0.0003	98.89	109.9000	-0.0003 u (ppm)
Mg (279.078 nm)	0.0054	ppm	0.0024	43.96	28.8500	0.0054 (ppm)
Mn (259.372 nm)	0.0003	ppm	0.0000	9.31	80.2200	0.0003 (ppm)
Mo (204.598 nm)	0.0236 Z	ppm	0.0026	11.03	88.9900 Z	0.0236 Z (ppm)
Na (589.592 nm)	-0.0059 u	ppm	0.0013	21.86	870.5000	-0.0059 u (ppm)
Ni (231.604 nm)	0.0006	ppm	0.0007	> 100.00	-9.3190	0.0006 (ppm)
P (213.618 nm)	-0.0034 u	ppm	0.0026	75.83	1.1630	-0.0034 u (ppm)
Pb (220.353 nm)	0.0020	ppm	0.0006	30.50	12.6500	0.0020 (ppm)
Sb (206.834 nm)	0.0037	ppm	0.0045	> 100.00	5.4600	0.0037 (ppm)
Se (196.026 nm)	0.0083	ppm	0.0043	51.74	6.6570	0.0083 (ppm)
Si (251.611 nm)	0.0175	ppm	0.0044	25.23	37.9300	0.0175 (ppm)
Sn (189.925 nm)	0.0059	ppm	0.0033	56.18	3.0600	0.0059 (ppm)
Sr (421.552 nm)	0.0002	ppm	0.0000	2.56	20.8300	0.0002 (ppm)
Ti (336.122 nm)	0.0067 Z	ppm	0.0008	12.02	518.5000 Z	0.0067 Z (ppm)
Tl (190.794 nm)	0.0040	ppm	0.0041	> 100.00	9.9060	0.0040 (ppm)
V (292.401 nm)	0.0010	ppm	0.0001	12.25	100.3000	0.0010 (ppm)
W (207.912 nm)	0.0157	ppm	0.0033	21.23	19.7800	0.0157 (ppm)
Zn (202.548 nm)	0.0010	ppm	0.0000	1.38	24.7100	0.0010 (ppm)
Zr (343.823 nm)	0.0006	ppm	0.0001	19.39	862.6000	0.0006 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9695	367000.0000	0.0010	0.10
Y_R 371.029	0.9700	49200.0000	0.0013	0.13

Sample Name: CCV 6043773

Date: 1/15/2020 6:27:33 PM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.4938	ppm	0.0010	0.21	19930.0000	0.4938 (ppm)
Al (396.152 nm)	0.9811	ppm	0.0011	0.11	30510.0000	0.9811 (ppm)
As (188.980 nm)	0.9890	ppm	0.0035	0.35	593.1000	0.9890 (ppm)
B (249.678 nm)	0.9861	ppm	0.0031	0.31	10420.0000	0.9861 (ppm)
Ba (233.527 nm)	1.0020	ppm	0.0029	0.28	85630.0000	1.0020 (ppm)
Be (234.861 nm)	0.9918	ppm	0.0007	0.07	155600.0000	0.9918 (ppm)
Ca (422.673 nm)	4.9200	ppm	0.0112	0.23	19260.0000	4.9200 (ppm)
Cd (214.439 nm)	0.9922	ppm	0.0010	0.10	21420.0000	0.9922 (ppm)
Co (228.615 nm)	0.9875	ppm	0.0020	0.20	12760.0000	0.9875 (ppm)
Cr (205.560 nm)	0.9881	ppm	0.0000	0.00	4386.0000	0.9881 (ppm)
Cu (324.754 nm)	0.9930	ppm	0.0040	0.41	38980.0000	0.9930 (ppm)
Fe (238.204 nm)	0.9977	ppm	0.0034	0.34	2461.0000	0.9977 (ppm)
K (766.491 nm)	9.9280	ppm	0.0977	0.98	10000.0000	9.9280 (ppm)
Li (670.783 nm)	0.9934	ppm	0.0013	0.13	56570.0000	0.9934 (ppm)
Mg (279.078 nm)	5.0470	ppm	0.0234	0.46	13640.0000	5.0470 (ppm)
Mn (259.372 nm)	0.9877	ppm	0.0001	0.01	91830.0000	0.9877 (ppm)
Mo (204.598 nm)	0.9912	ppm	0.0016	0.16	3818.0000	0.9912 (ppm)
Na (589.592 nm)	9.9400	ppm	0.0119	0.12	53370.0000	9.9400 (ppm)
Ni (231.604 nm)	0.9901	ppm	0.0006	0.06	4332.0000	0.9901 (ppm)
P (213.618 nm)	0.9894	ppm	0.0068	0.69	698.5000	0.9894 (ppm)
Pb (220.353 nm)	0.9922	ppm	0.0017	0.17	1967.0000	0.9922 (ppm)
Sb (206.834 nm)	1.0030	ppm	0.0217	2.16	880.0000	1.0030 (ppm)
Se (196.026 nm)	0.9962	ppm	0.0006	0.06	613.3000	0.9962 (ppm)
Si (251.611 nm)	5.0070	ppm	0.0548	1.09	10590.0000	5.0070 (ppm)
Sn (189.925 nm)	0.9921	ppm	0.0090	0.91	572.0000	0.9921 (ppm)
Sr (421.552 nm)	0.9859	ppm	0.0003	0.03	341000.0000	0.9859 (ppm)
Ti (336.122 nm)	1.0040	ppm	0.0046	0.46	100700.0000	1.0040 (ppm)
Tl (190.794 nm)	0.9897	ppm	0.0081	0.82	1071.0000	0.9897 (ppm)
V (292.401 nm)	0.9919	ppm	0.0009	0.09	30150.0000	0.9919 (ppm)
W (207.912 nm)	0.9974	ppm	0.0052	0.52	1630.0000	0.9974 (ppm)
Zn (202.548 nm)	0.9947	ppm	0.0012	0.12	15430.0000	0.9947 (ppm)
Zr (343.823 nm)	0.9658	ppm	0.0026	0.27	78930.0000	0.9658 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9585	362800.0000	0.0008	0.08
Y_R 371.029	0.9562	48500.0000	0.0023	0.24

Sample Name: CCB 6043772

Date: 1/15/2020 6:29:44 PM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.0001	ppm	0.0000	52.34	49.2200	0.0001 (ppm)
Al (396.152 nm)	0.0004	ppm	0.0001	23.77	-300.1000	0.0004 (ppm)
As (188.980 nm)	0.0039	ppm	0.0009	22.85	1.0530	0.0039 (ppm)
B (249.678 nm)	0.0027	ppm	0.0002	5.79	14.3400	0.0027 (ppm)
Ba (233.527 nm)	0.0005	ppm	0.0002	38.53	104.2000	0.0005 (ppm)
Be (234.861 nm)	0.0005	ppm	0.0001	27.72	96.9400	0.0005 (ppm)
Ca (422.673 nm)	0.0096	ppm	0.0091	94.78	117.6000	0.0096 (ppm)
Cd (214.439 nm)	0.0006	ppm	0.0003	49.62	5.5710	0.0006 (ppm)
Co (228.615 nm)	0.0002 u	ppm	0.0006	> 100.00	-5.9040	0.0002 u (ppm)
Cr (205.560 nm)	-0.0001 u	ppm	0.0005	> 100.00	0.0076	-0.0001 u (ppm)
Cu (324.754 nm)	0.0010	ppm	0.0003	29.38	175.3000	0.0010 (ppm)
Fe (238.204 nm)	0.0046	ppm	0.0000	0.88	-44.0700	0.0046 (ppm)
K (766.491 nm)	0.0776	ppm	0.0700	90.16	-46.6300	0.0776 (ppm)
Li (670.783 nm)	0.0029	ppm	0.0025	84.95	293.4000	0.0029 (ppm)
Mg (279.078 nm)	0.0033	ppm	0.0020	61.99	23.1100	0.0033 (ppm)
Mn (259.372 nm)	0.0005	ppm	0.0002	34.20	100.3000	0.0005 (ppm)
Mo (204.598 nm)	0.0148	ppm	0.0020	13.59	55.4300	0.0148 (ppm)
Na (589.592 nm)	-0.0212 u	ppm	0.0060	28.31	790.0000	-0.0212 u (ppm)
Ni (231.604 nm)	0.0007	ppm	0.0001	7.39	-8.9540	0.0007 (ppm)
P (213.618 nm)	0.0014	ppm	0.0017	> 100.00	4.8950	0.0014 (ppm)
Pb (220.353 nm)	0.0009 u	ppm	0.0014	> 100.00	10.5100	0.0009 u (ppm)
Sb (206.834 nm)	0.0090	ppm	0.0003	3.77	10.2700	0.0090 (ppm)
Se (196.026 nm)	0.0077	ppm	0.0094	> 100.00	6.2580	0.0077 (ppm)
Si (251.611 nm)	0.0105	ppm	0.0006	6.00	22.6900	0.0105 (ppm)
Sn (189.925 nm)	0.0030	ppm	0.0003	9.34	1.3700	0.0030 (ppm)
Sr (421.552 nm)	0.0003	ppm	0.0001	19.42	53.6000	0.0003 (ppm)
Ti (336.122 nm)	0.0053 Z	ppm	0.0006	10.67	376.1000 Z	0.0053 Z (ppm)
Tl (190.794 nm)	0.0016	ppm	0.0008	53.92	7.1810	0.0016 (ppm)
V (292.401 nm)	0.0009	ppm	0.0001	8.11	98.8300	0.0009 (ppm)
W (207.912 nm)	0.0132	ppm	0.0025	18.54	15.6900	0.0132 (ppm)
Zn (202.548 nm)	0.0008	ppm	0.0004	49.05	20.7300	0.0008 (ppm)
Zr (343.823 nm)	0.0008	ppm	0.0002	26.50	876.5000	0.0008 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9687	366700.0000	0.0010	0.10
Y_R 371.029	0.9627	48830.0000	0.0000	0.00

Sample Name: MB 440-590699/1-A@5

Date: 1/15/2020 6:31:56 PM

Rack:Tube: 2:28

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0001 u	ppm	0.0001	86.28	40.2500	-0.0001 u (ppm)
Al (396.152 nm)	0.0035	ppm	0.0008	23.36	-216.6000	0.0035 (ppm)
As (188.980 nm)	0.0045	ppm	0.0025	55.84	1.4130	0.0045 (ppm)
B (249.678 nm)	0.0036	ppm	0.0006	16.51	25.6600	0.0036 (ppm)
Ba (233.527 nm)	0.0003	ppm	0.0000	1.94	82.0400	0.0003 (ppm)
Be (234.861 nm)	0.0000	ppm	0.0000	22.85	19.7100	0.0000 (ppm)
Ca (422.673 nm)	0.0294	ppm	0.0113	38.40	194.8000	0.0294 (ppm)
Cd (214.439 nm)	0.0000	ppm	0.0000	> 100.00	-5.5490	0.0000 (ppm)
Co (228.615 nm)	0.0001	ppm	0.0000	3.62	-7.0690	0.0001 (ppm)
Cr (205.560 nm)	0.0005 u	ppm	0.0009	> 100.00	2.8760	0.0005 u (ppm)
Cu (324.754 nm)	0.0032	ppm	0.0002	7.45	261.3000	0.0032 (ppm)
Fe (238.204 nm)	0.0149	ppm	0.0005	3.06	-18.0700	0.0149 (ppm)
K (766.491 nm)	-0.0734 u	ppm	0.0156	21.32	-200.5000	-0.0734 u (ppm)
Li (670.783 nm)	0.0007 u	ppm	0.0015	> 100.00	166.7000	0.0007 u (ppm)
Mg (279.078 nm)	0.0044	ppm	0.0035	79.54	26.1200	0.0044 (ppm)
Mn (259.372 nm)	0.0003	ppm	0.0000	3.70	72.9500	0.0003 (ppm)
Mo (204.598 nm)	0.0040	ppm	0.0001	2.05	13.7600	0.0040 (ppm)
Na (589.592 nm)	-0.0202 u	ppm	0.0092	45.76	794.9000	-0.0202 u (ppm)
Ni (231.604 nm)	-0.0001 u	ppm	0.0003	> 100.00	-12.5100	-0.0001 u (ppm)
P (213.618 nm)	-0.0002 u	ppm	0.0028	> 100.00	3.7750	-0.0002 u (ppm)
Pb (220.353 nm)	0.0017	ppm	0.0001	4.67	12.0400	0.0017 (ppm)
Sb (206.834 nm)	-0.0017 u	ppm	0.0008	44.99	0.9927	-0.0017 u (ppm)
Se (196.026 nm)	0.0089	ppm	0.0034	37.62	6.9560	0.0089 (ppm)
Si (251.611 nm)	0.0190	ppm	0.0011	5.56	39.3000	0.0190 (ppm)
Sn (189.925 nm)	0.0040	ppm	0.0024	61.14	1.9510	0.0040 (ppm)
Sr (421.552 nm)	0.0002	ppm	0.0000	26.11	19.2800	0.0002 (ppm)
Ti (336.122 nm)	0.0022	ppm	0.0007	30.82	59.0300	0.0022 (ppm)
Tl (190.794 nm)	-0.0008 u	ppm	0.0018	> 100.00	4.5680	-0.0008 u (ppm)
V (292.401 nm)	0.0003	ppm	0.0002	76.99	82.3800	0.0003 (ppm)
W (207.912 nm)	0.0067	ppm	0.0007	10.76	5.1430	0.0067 (ppm)
Zn (202.548 nm)	0.0015	ppm	0.0001	6.00	31.7200	0.0015 (ppm)
Zr (343.823 nm)	0.0013	ppm	0.0001	4.13	919.8000	0.0013 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9722	368000.0000	0.0007	0.07
Y_R 371.029	0.9667	49030.0000	0.0015	0.16

Sample Name: LCS 440-590699/2-A@5

Date: 1/15/2020 6:34:09 PM

Rack:Tube: 2:29

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.1836	ppm	0.0008	0.43	7433.0000	0.1836 (ppm)
Al (396.152 nm)	0.3625	ppm	0.0009	0.24	11070.0000	0.3625 (ppm)
As (188.980 nm)	0.3631	ppm	0.0028	0.76	216.8000	0.3631 (ppm)
B (249.678 nm)	0.3583	ppm	0.0025	0.70	3778.0000	0.3583 (ppm)
Ba (233.527 nm)	0.3763	ppm	0.0002	0.05	32200.0000	0.3763 (ppm)
Be (234.861 nm)	0.3608	ppm	0.0001	0.04	56620.0000	0.3608 (ppm)
Ca (422.673 nm)	1.8860	ppm	0.0011	0.06	7432.0000	1.8860 (ppm)
Cd (214.439 nm)	0.3661	ppm	0.0002	0.05	7899.0000	0.3661 (ppm)
Co (228.615 nm)	0.3708	ppm	0.0039	1.04	4786.0000	0.3708 (ppm)
Cr (205.560 nm)	0.3743	ppm	0.0005	0.13	1662.0000	0.3743 (ppm)
Cu (324.754 nm)	0.3803	ppm	0.0001	0.03	15010.0000	0.3803 (ppm)
Fe (238.204 nm)	0.4123	ppm	0.0003	0.07	984.3000	0.4123 (ppm)
K (766.491 nm)	3.8070	ppm	0.0427	1.12	3757.0000	3.8070 (ppm)
Li (670.783 nm)	0.3748	ppm	0.0009	0.23	21420.0000	0.3748 (ppm)
Mg (279.078 nm)	1.8870	ppm	0.0015	0.08	5109.0000	1.8870 (ppm)
Mn (259.372 nm)	0.3731	ppm	0.0001	0.03	34730.0000	0.3731 (ppm)
Mo (204.598 nm)	0.3942	ppm	0.0009	0.23	1517.0000	0.3942 (ppm)
Na (589.592 nm)	3.7380	ppm	0.0127	0.34	20630.0000	3.7380 (ppm)
Ni (231.604 nm)	0.3735	ppm	0.0023	0.61	1627.0000	0.3735 (ppm)
P (213.618 nm)	0.3695	ppm	0.0032	0.88	262.9000	0.3695 (ppm)
Pb (220.353 nm)	0.3716	ppm	0.0017	0.46	742.3000	0.3716 (ppm)
Sb (206.834 nm)	0.3618	ppm	0.0030	0.84	318.5000	0.3618 (ppm)
Se (196.026 nm)	0.3384	ppm	0.0057	1.67	209.5000	0.3384 (ppm)
Si (251.611 nm)	0.3517	ppm	0.0041	1.18	793.0000	0.3517 (ppm)
Sn (189.925 nm)	0.3720	ppm	0.0002	0.05	214.3000	0.3720 (ppm)
Sr (421.552 nm)	0.3718	ppm	0.0036	0.97	128500.0000	0.3718 (ppm)
Ti (336.122 nm)	0.3740	ppm	0.0001	0.03	37390.0000	0.3740 (ppm)
Tl (190.794 nm)	0.3621	ppm	0.0099	2.72	395.3000	0.3621 (ppm)
V (292.401 nm)	0.3736	ppm	0.0001	0.03	11400.0000	0.3736 (ppm)
W (207.912 nm)	0.3759	ppm	0.0031	0.82	610.3000	0.3759 (ppm)
Zn (202.548 nm)	0.3635	ppm	0.0002	0.04	5644.0000	0.3635 (ppm)
Zr (343.823 nm)	0.2978	ppm	0.0014	0.46	24900.0000	0.2978 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9650	365300.0000	0.0011	0.11
Y_R 371.029	0.9601	48700.0000	0.0004	0.04

Sample Name: 440-259135-C-1-A SD@25

Date: 1/15/2020 6:36:21 PM

Rack:Tube: 2:30

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.0002 u	ppm	0.0003	> 100.00	-26.2400	0.0002 u (ppm)
Al (396.152 nm)	27.1300	ppm	0.4763	1.76	821900.0000	27.1300 (ppm)
As (188.980 nm)	0.0284	ppm	0.0030	10.45	13.1200	0.0284 (ppm)
B (249.678 nm)	0.0099	ppm	0.0030	30.90	36.5500	0.0099 (ppm)
Ba (233.527 nm)	0.3711	ppm	0.0211	5.69	31770.0000	0.3711 (ppm)
Be (234.861 nm)	0.0006	ppm	0.0002	40.99	826.2000	0.0006 (ppm)
Ca (422.673 nm)	10.0300	ppm	0.8899	8.87	39180.0000	10.0300 (ppm)
Cd (214.439 nm)	0.0006	ppm	0.0001	15.21	14.9700	0.0006 (ppm)
Co (228.615 nm)	0.0176	ppm	0.0008	4.46	254.4000	0.0176 (ppm)
Cr (205.560 nm)	0.0428	ppm	0.0006	1.50	191.9000	0.0428 (ppm)
Cu (324.754 nm)	0.0458	ppm	0.0009	1.87	1947.0000	0.0458 (ppm)
Fe (238.204 nm)	46.9700	ppm	4.0490	8.62	118500.0000	46.9700 (ppm)
K (766.491 nm)	4.5830	ppm	0.4864	10.61	4562.0000	4.5830 (ppm)
Li (670.783 nm)	0.0277	ppm	0.0056	20.37	1563.0000	0.0277 (ppm)
Mg (279.078 nm)	11.4700	ppm	0.6379	5.56	30940.0000	11.4700 (ppm)
Mn (259.372 nm)	0.7216	ppm	0.0139	1.93	71920.0000	0.7216 (ppm)
Mo (204.598 nm)	0.0042	ppm	0.0014	32.83	18.1900	0.0042 (ppm)
Na (589.592 nm)	1.3440	ppm	0.1335	9.93	8369.0000	1.3440 (ppm)
Ni (231.604 nm)	0.0339	ppm	0.0012	3.63	134.4000	0.0339 (ppm)
P (213.618 nm)	0.8851	ppm	0.0201	2.27	664.8000	0.8851 (ppm)
Pb (220.353 nm)	0.0316	ppm	0.0022	6.84	49.6800	0.0316 (ppm)
Sb (206.834 nm)	-0.0002 u	ppm	0.0030	> 100.00	3.1790	-0.0002 u (ppm)
Se (196.026 nm)	-0.0001 u	ppm	0.0013	> 100.00	-9.0830	-0.0001 u (ppm)
Si (251.611 nm)	0.2254	ppm	0.0072	3.21	480.7000	0.2254 (ppm)
Sn (189.925 nm)	0.0000 u	ppm	0.0004	> 100.00	-0.3924	0.0000 u (ppm)
Sr (421.552 nm)	0.0768	ppm	0.0066	8.61	26650.0000	0.0768 (ppm)
Ti (336.122 nm)	1.3570	ppm	0.0243	1.79	136100.0000	1.3570 (ppm)
Tl (190.794 nm)	-0.0109 u	ppm	0.0018	16.39	-19.3800	-0.0109 u (ppm)
V (292.401 nm)	0.0740	ppm	0.0018	2.46	2381.0000	0.0740 (ppm)
W (207.912 nm)	0.0073	ppm	0.0005	6.74	6.6510	0.0073 (ppm)
Zn (202.548 nm)	0.1155	ppm	0.0026	2.29	1774.0000	0.1155 (ppm)
Zr (343.823 nm)	0.0167	ppm	0.0000	0.08	1217.0000	0.0167 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9729	368300.0000	0.0145	1.49
Y_R 371.029	0.8709	44170.0000	0.0519	5.96

Sample Name: 440-259135-C-1-A@5

Date: 1/15/2020 6:38:32 PM

Rack:Tube: 2:31

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.0022	ppm	0.0001	4.01	-234.6000	0.0022 (ppm)
Al (396.152 nm)	145.0000	ppm	0.0221	0.02	4393000.0000	145.0000 (ppm)
As (188.980 nm)	0.1239	ppm	0.0024	1.98	61.2200	0.1239 (ppm)
B (249.678 nm)	0.0410	ppm	0.0009	2.14	176.1000	0.0410 (ppm)
Ba (233.527 nm)	1.6710	ppm	0.0007	0.04	142800.0000	1.6710 (ppm)
Be (234.861 nm)	0.0057	ppm	0.0004	7.79	4140.0000	0.0057 (ppm)
Ca (422.673 nm)	46.3600	ppm	0.0471	0.10	180800.0000	46.3600 (ppm)
Cd (214.439 nm)	0.0016	ppm	0.0004	24.33	61.6000	0.0016 (ppm)
Co (228.615 nm)	0.0822	ppm	0.0044	5.32	1238.0000	0.0822 (ppm)
Cr (205.560 nm)	0.2207	ppm	0.0002	0.10	986.6000	0.2207 (ppm)
Cu (324.754 nm)	0.2398	ppm	0.0007	0.28	9628.0000	0.2398 (ppm)
Fe (238.204 nm)	210.7000	ppm	0.7377	0.35	531800.0000	210.7000 (ppm)
K (766.491 nm)	20.9000	ppm	0.0232	0.11	21260.0000	20.9000 (ppm)
Li (670.783 nm)	0.1185	ppm	0.0006	0.48	6321.0000	0.1185 (ppm)
Mg (279.078 nm)	51.7200	ppm	0.0648	0.13	139500.0000	51.7200 (ppm)
Mn (259.372 nm)	3.7160	ppm	0.0067	0.18	366800.0000	3.7160 (ppm)
Mo (204.598 nm)	0.0049	ppm	0.0002	3.89	35.8800	0.0049 (ppm)
Na (589.592 nm)	6.2170	ppm	0.0059	0.09	35390.0000	6.2170 (ppm)
Ni (231.604 nm)	0.1696	ppm	0.0008	0.50	721.4000	0.1696 (ppm)
P (213.618 nm)	4.5450	ppm	0.0192	0.42	3396.0000	4.5450 (ppm)
Pb (220.353 nm)	0.1322	ppm	0.0001	0.10	171.2000	0.1322 (ppm)
Sb (206.834 nm)	0.0131 u	ppm	0.0231	> 100.00	18.2600	0.0131 u (ppm)
Se (196.026 nm)	0.0063 u	ppm	0.0108	> 100.00	-41.9800	0.0063 u (ppm)
Si (251.611 nm)	1.1530	ppm	0.0006	0.06	2461.0000	1.1530 (ppm)
Sn (189.925 nm)	-0.0008 u	ppm	0.0058	> 100.00	-0.9914	-0.0008 u (ppm)
Sr (421.552 nm)	0.3529	ppm	0.0000	0.01	122600.0000	0.3529 (ppm)
Ti (336.122 nm)	7.1210	ppm	0.0137	0.19	714700.0000	7.1210 (ppm)
Tl (190.794 nm)	-0.0676 u	ppm	0.0001	0.09	-139.9000	-0.0676 u (ppm)
V (292.401 nm)	0.3855	ppm	0.0002	0.06	12090.0000	0.3855 (ppm)
W (207.912 nm)	0.0022 u	ppm	0.0041	> 100.00	1.1770	0.0022 u (ppm)
Zn (202.548 nm)	0.5722	ppm	0.0015	0.26	8762.0000	0.5722 (ppm)
Zr (343.823 nm)	0.0779	ppm	0.0004	0.58	2842.0000	0.0779 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9434	357100.0000	0.0025	0.26
Y_R 371.029	0.9612	48750.0000	0.0025	0.26

Sample Name: 440-259135-C-1-B MS@5

Date: 1/15/2020 6:40:45 PM

Rack:Tube: 2:32

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.1753	ppm	0.0001	0.07	6716.0000	0.1753 (ppm)
Al (396.152 nm)	171.2000	ppm	0.0644	0.04	5188000.0000	171.2000 (ppm)
As (188.980 nm)	0.4778	ppm	0.0002	0.05	273.9000	0.4778 (ppm)
B (249.678 nm)	0.3544	ppm	0.0010	0.29	3510.0000	0.3544 (ppm)
Ba (233.527 nm)	2.0490	ppm	0.0012	0.06	175100.0000	2.0490 (ppm)
Be (234.861 nm)	0.3479	ppm	0.0003	0.08	57860.0000	0.3479 (ppm)
Ca (422.673 nm)	45.4000	ppm	0.1068	0.24	177000.0000	45.4000 (ppm)
Cd (214.439 nm)	0.3328	ppm	0.0003	0.08	7214.0000	0.3328 (ppm)
Co (228.615 nm)	0.4129	ppm	0.0019	0.46	5546.0000	0.4129 (ppm)
Cr (205.560 nm)	0.5687	ppm	0.0032	0.57	2531.0000	0.5687 (ppm)
Cu (324.754 nm)	0.5958	ppm	0.0017	0.29	23570.0000	0.5958 (ppm)
Fe (238.204 nm)	213.0000	ppm	1.0230	0.48	537600.0000	213.0000 (ppm)
K (766.491 nm)	25.2700	ppm	0.0204	0.08	25720.0000	25.2700 (ppm)
Li (670.783 nm)	0.4787	ppm	0.0012	0.24	26880.0000	0.4787 (ppm)
Mg (279.078 nm)	52.4400	ppm	0.0120	0.02	141500.0000	52.4400 (ppm)
Mn (259.372 nm)	4.2870	ppm	0.0060	0.14	419900.0000	4.2870 (ppm)
Mo (204.598 nm)	0.3425	ppm	0.0026	0.77	1339.0000	0.3425 (ppm)
Na (589.592 nm)	9.0860	ppm	0.0185	0.20	50550.0000	9.0860 (ppm)
Ni (231.604 nm)	0.5032	ppm	0.0001	0.01	2185.0000	0.5032 (ppm)
P (213.618 nm)	4.1580	ppm	0.0082	0.20	3093.0000	4.1580 (ppm)
Pb (220.353 nm)	0.4552	ppm	0.0037	0.82	805.2000	0.4552 (ppm)
Sb (206.834 nm)	0.1377	ppm	0.0053	3.86	126.3000	0.1377 (ppm)
Se (196.026 nm)	0.3146	ppm	0.0149	4.73	145.9000	0.3146 (ppm)
Si (251.611 nm)	2.1340	ppm	0.0019	0.09	4548.0000	2.1340 (ppm)
Sn (189.925 nm)	0.3286	ppm	0.0048	1.46	189.0000	0.3286 (ppm)
Sr (421.552 nm)	0.7287	ppm	0.0021	0.29	252500.0000	0.7287 (ppm)
Ti (336.122 nm)	8.9160	ppm	0.0109	0.12	894900.0000	8.9160 (ppm)
Tl (190.794 nm)	0.2374	ppm	0.0140	5.89	169.8000	0.2374 (ppm)
V (292.401 nm)	0.7557	ppm	0.0009	0.12	23360.0000	0.7557 (ppm)
W (207.912 nm)	0.1302	ppm	0.0006	0.48	213.8000	0.1302 (ppm)
Zn (202.548 nm)	0.9206	ppm	0.0011	0.12	14160.0000	0.9206 (ppm)
Zr (343.823 nm)	0.2891	ppm	0.0018	0.64	19890.0000	0.2891 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9379	355000.0000	0.0005	0.06
Y_R 371.029	0.9561	48490.0000	0.0003	0.03

Sample Name: 440-259135-C-1-C MSD@5

Date: 1/15/2020 6:42:57 PM

Rack:Tube: 2:33

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.1710	ppm	0.0002	0.12	6558.0000	0.1710 (ppm)
Al (396.152 nm)	165.3000	ppm	0.4975	0.30	5009000.0000	165.3000 (ppm)
As (188.980 nm)	0.4307	ppm	0.0025	0.57	245.6000	0.4307 (ppm)
B (249.678 nm)	0.3426	ppm	0.0016	0.46	3390.0000	0.3426 (ppm)
Ba (233.527 nm)	1.9510	ppm	0.0089	0.46	166800.0000	1.9510 (ppm)
Be (234.861 nm)	0.3387	ppm	0.0004	0.12	56330.0000	0.3387 (ppm)
Ca (422.673 nm)	44.1600	ppm	0.0897	0.20	172200.0000	44.1600 (ppm)
Cd (214.439 nm)	0.3237	ppm	0.0003	0.10	7016.0000	0.3237 (ppm)
Co (228.615 nm)	0.4075	ppm	0.0009	0.21	5468.0000	0.4075 (ppm)
Cr (205.560 nm)	0.5521	ppm	0.0009	0.17	2457.0000	0.5521 (ppm)
Cu (324.754 nm)	0.5809	ppm	0.0011	0.19	22980.0000	0.5809 (ppm)
Fe (238.204 nm)	208.0000	ppm	0.0741	0.04	524900.0000	208.0000 (ppm)
K (766.491 nm)	24.0700	ppm	0.0559	0.23	24490.0000	24.0700 (ppm)
Li (670.783 nm)	0.4679	ppm	0.0021	0.45	26260.0000	0.4679 (ppm)
Mg (279.078 nm)	51.8700	ppm	0.2435	0.47	139900.0000	51.8700 (ppm)
Mn (259.372 nm)	4.5180	ppm	0.0069	0.15	440600.0000	4.5180 (ppm)
Mo (204.598 nm)	0.3441	ppm	0.0019	0.56	1345.0000	0.3441 (ppm)
Na (589.592 nm)	9.3720	ppm	0.0448	0.48	52020.0000	9.3720 (ppm)
Ni (231.604 nm)	0.4939	ppm	0.0004	0.07	2144.0000	0.4939 (ppm)
P (213.618 nm)	4.2290	ppm	0.0347	0.82	3145.0000	4.2290 (ppm)
Pb (220.353 nm)	0.4281	ppm	0.0019	0.44	754.3000	0.4281 (ppm)
Sb (206.834 nm)	0.1545	ppm	0.0167	10.80	140.8000	0.1545 (ppm)
Se (196.026 nm)	0.3181	ppm	0.0008	0.26	149.3000	0.3181 (ppm)
Si (251.611 nm)	2.2200	ppm	0.0012	0.05	4724.0000	2.2200 (ppm)
Sn (189.925 nm)	0.3216	ppm	0.0016	0.48	184.9000	0.3216 (ppm)
Sr (421.552 nm)	0.6755	ppm	0.0013	0.20	234100.0000	0.6755 (ppm)
Ti (336.122 nm)	8.5700	ppm	0.0292	0.34	860200.0000	8.5700 (ppm)
Tl (190.794 nm)	0.2354	ppm	0.0053	2.24	171.9000	0.2354 (ppm)
V (292.401 nm)	0.7357	ppm	0.0021	0.28	22740.0000	0.7357 (ppm)
W (207.912 nm)	0.1397	ppm	0.0032	2.26	228.8000	0.1397 (ppm)
Zn (202.548 nm)	0.8725	ppm	0.0006	0.07	13420.0000	0.8725 (ppm)
Zr (343.823 nm)	0.3246	ppm	0.0001	0.02	22860.0000	0.3246 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9386	355200.0000	0.0010	0.11
Y_R 371.029	0.9620	48790.0000	0.0045	0.47

Sample Name: 440-259135-C-1-A PDS@5

Date: 1/15/2020 6:45:07 PM

Rack:Tube: 2:34

Weight (g): 1

Volume (mL): 1

Dilution: 1

**Analyte Results**

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.1846	ppm	0.0001	0.05	7124.0000	0.1846 (ppm)
Al (396.152 nm)	142.7000	ppm	0.1098	0.08	4326000.0000	142.7000 (ppm)
As (188.980 nm)	0.4772	ppm	0.0017	0.36	273.8000	0.4772 (ppm)
B (249.678 nm)	0.3980	ppm	0.0026	0.65	3959.0000	0.3980 (ppm)
Ba (233.527 nm)	1.9960	ppm	0.0000	0.00	170600.0000	1.9960 (ppm)
Be (234.861 nm)	0.3652	ppm	0.0025	0.68	60480.0000	0.3652 (ppm)
Ca (422.673 nm)	46.8600	ppm	0.0807	0.17	182800.0000	46.8600 (ppm)
Cd (214.439 nm)	0.3490	ppm	0.0023	0.65	7563.0000	0.3490 (ppm)
Co (228.615 nm)	0.4285	ppm	0.0015	0.36	5713.0000	0.4285 (ppm)
Cr (205.560 nm)	0.5753	ppm	0.0036	0.63	2560.0000	0.5753 (ppm)
Cu (324.754 nm)	0.6078	ppm	0.0012	0.20	24020.0000	0.6078 (ppm)
Fe (238.204 nm)	206.7000	ppm	0.4246	0.21	521700.0000	206.7000 (ppm)
K (766.491 nm)	24.0100	ppm	0.1069	0.45	24430.0000	24.0100 (ppm)
Li (670.783 nm)	0.4847	ppm	0.0026	0.53	27140.0000	0.4847 (ppm)
Mg (279.078 nm)	52.5500	ppm	0.0329	0.06	141800.0000	52.5500 (ppm)
Mn (259.372 nm)	3.9950	ppm	0.0030	0.07	392200.0000	3.9950 (ppm)
Mo (204.598 nm)	0.4026	ppm	0.0057	1.41	1568.0000	0.4026 (ppm)
Na (589.592 nm)	9.7300	ppm	0.0059	0.06	53900.0000	9.7300 (ppm)
Ni (231.604 nm)	0.5125	ppm	0.0026	0.51	2226.0000	0.5125 (ppm)
P (213.618 nm)	4.8650	ppm	0.0032	0.07	3618.0000	4.8650 (ppm)
Pb (220.353 nm)	0.4793	ppm	0.0015	0.32	858.3000	0.4793 (ppm)
Sb (206.834 nm)	0.4002	ppm	0.0030	0.76	356.3000	0.4002 (ppm)
Se (196.026 nm)	0.3484	ppm	0.0109	3.12	169.1000	0.3484 (ppm)
Si (251.611 nm)	2.9790	ppm	0.0126	0.42	6324.0000	2.9790 (ppm)
Sn (189.925 nm)	0.3775	ppm	0.0032	0.85	217.3000	0.3775 (ppm)
Sr (421.552 nm)	0.7071	ppm	0.0005	0.07	245100.0000	0.7071 (ppm)
Ti (336.122 nm)	7.3800	ppm	0.0106	0.14	740700.0000	7.3800 (ppm)
Tl (190.794 nm)	0.2700	ppm	0.0060	2.21	223.9000	0.2700 (ppm)
V (292.401 nm)	0.7443	ppm	0.0007	0.10	22950.0000	0.7443 (ppm)
W (207.912 nm)	0.3757	ppm	0.0017	0.46	613.1000	0.3757 (ppm)
Zn (202.548 nm)	0.9015	ppm	0.0014	0.15	13870.0000	0.9015 (ppm)
Zr (343.823 nm)	0.4751	ppm	0.0041	0.87	35060.0000	0.4751 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9403	355900.0000	0.0026	0.28
Y_R 371.029	0.9562	48500.0000	0.0039	0.41

Sample Name: CCV 6043773

Date: 1/15/2020 6:47:19 PM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.4950	ppm	0.0011	0.22	19990.0000	0.4950 (ppm)
Al (396.152 nm)	1.1010 Q	ppm	0.0457	4.15	34150.0000 Q	1.1010 Q (ppm)
As (188.980 nm)	0.9927	ppm	0.0068	0.69	595.3000	0.9927 (ppm)
B (249.678 nm)	0.9863	ppm	0.0046	0.47	10420.0000	0.9863 (ppm)
Ba (233.527 nm)	1.0080	ppm	0.0071	0.70	86130.0000	1.0080 (ppm)
Be (234.861 nm)	0.9932	ppm	0.0028	0.28	155800.0000	0.9932 (ppm)
Ca (422.673 nm)	4.9640	ppm	0.0179	0.36	19430.0000	4.9640 (ppm)
Cd (214.439 nm)	0.9929	ppm	0.0021	0.22	21430.0000	0.9929 (ppm)
Co (228.615 nm)	0.9889	ppm	0.0004	0.04	12780.0000	0.9889 (ppm)
Cr (205.560 nm)	0.9894	ppm	0.0028	0.28	4392.0000	0.9894 (ppm)
Cu (324.754 nm)	0.9964	ppm	0.0068	0.68	39110.0000	0.9964 (ppm)
Fe (238.204 nm)	1.1270 Q	ppm	0.0143	1.27	2787.0000 Q	1.1270 Q (ppm)
K (766.491 nm)	9.8370	ppm	0.0633	0.64	9908.0000	9.8370 (ppm)
Li (670.783 nm)	0.9964	ppm	0.0054	0.54	56740.0000	0.9964 (ppm)
Mg (279.078 nm)	5.0950	ppm	0.0227	0.45	13770.0000	5.0950 (ppm)
Mn (259.372 nm)	0.9934	ppm	0.0013	0.14	92370.0000	0.9934 (ppm)
Mo (204.598 nm)	0.9896	ppm	0.0033	0.34	3812.0000	0.9896 (ppm)
Na (589.592 nm)	9.9520	ppm	0.0566	0.57	53440.0000	9.9520 (ppm)
Ni (231.604 nm)	0.9887	ppm	0.0022	0.22	4325.0000	0.9887 (ppm)
P (213.618 nm)	1.0000	ppm	0.0048	0.48	706.7000	1.0000 (ppm)
Pb (220.353 nm)	0.9918	ppm	0.0033	0.33	1967.0000	0.9918 (ppm)
Sb (206.834 nm)	0.9854	ppm	0.0169	1.72	864.1000	0.9854 (ppm)
Se (196.026 nm)	0.9873	ppm	0.0060	0.61	607.8000	0.9873 (ppm)
Si (251.611 nm)	4.9700	ppm	0.0499	1.00	10520.0000	4.9700 (ppm)
Sn (189.925 nm)	0.9995	ppm	0.0033	0.33	576.3000	0.9995 (ppm)
Sr (421.552 nm)	0.9891	ppm	0.0045	0.45	342000.0000	0.9891 (ppm)
Ti (336.122 nm)	1.0330	ppm	0.0003	0.03	103500.0000	1.0330 (ppm)
Tl (190.794 nm)	0.9912	ppm	0.0029	0.29	1073.0000	0.9912 (ppm)
V (292.401 nm)	0.9940	ppm	0.0028	0.28	30210.0000	0.9940 (ppm)
W (207.912 nm)	1.0030	ppm	0.0043	0.43	1639.0000	1.0030 (ppm)
Zn (202.548 nm)	0.9951	ppm	0.0010	0.10	15430.0000	0.9951 (ppm)
Zr (343.823 nm)	1.0300	ppm	0.0043	0.42	84150.0000	1.0300 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9603	363500.0000	0.0012	0.12
Y_R 371.029	0.9560	48490.0000	0.0040	0.42

Sample Name: CCB 6043772

Date: 1/15/2020 6:49:47 PM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.0002	ppm	0.0002	> 100.00	52.2900	0.0002 (ppm)
Al (396.152 nm)	0.0081	ppm	0.0010	12.81	-69.6500	0.0081 (ppm)
As (188.980 nm)	0.0042	ppm	0.0018	42.05	1.2350	0.0042 (ppm)
B (249.678 nm)	0.0023	ppm	0.0009	40.44	10.5600	0.0023 (ppm)
Ba (233.527 nm)	0.0007	ppm	0.0002	26.15	123.9000	0.0007 (ppm)
Be (234.861 nm)	0.0007	ppm	0.0002	35.16	120.9000	0.0007 (ppm)
Ca (422.673 nm)	0.0135	ppm	0.0098	72.45	133.0000	0.0135 (ppm)
Cd (214.439 nm)	0.0007	ppm	0.0002	26.44	8.9890	0.0007 (ppm)
Co (228.615 nm)	0.0009	ppm	0.0001	12.44	3.0690	0.0009 (ppm)
Cr (205.560 nm)	0.0010	ppm	0.0001	9.54	4.9170	0.0010 (ppm)
Cu (324.754 nm)	0.0011	ppm	0.0002	19.11	178.7000	0.0011 (ppm)
Fe (238.204 nm)	0.0160	ppm	0.0005	3.02	-15.1100	0.0160 (ppm)
K (766.491 nm)	0.0124 u	ppm	0.1007	> 100.00	-113.1000	0.0124 u (ppm)
Li (670.783 nm)	0.0005	ppm	0.0006	> 100.00	154.5000	0.0005 (ppm)
Mg (279.078 nm)	0.0080	ppm	0.0014	17.35	35.8300	0.0080 (ppm)
Mn (259.372 nm)	0.0009	ppm	0.0003	29.21	137.6000	0.0009 (ppm)
Mo (204.598 nm)	0.0105	ppm	0.0006	5.60	38.6500	0.0105 (ppm)
Na (589.592 nm)	-0.0681 u	ppm	0.0072	10.59	542.4000	-0.0681 u (ppm)
Ni (231.604 nm)	0.0006 u	ppm	0.0010	> 100.00	-9.0990	0.0006 u (ppm)
P (213.618 nm)	-0.0003 u	ppm	0.0099	> 100.00	3.6730	-0.0003 u (ppm)
Pb (220.353 nm)	-0.0005 u	ppm	0.0006	> 100.00	7.7070	-0.0005 u (ppm)
Sb (206.834 nm)	-0.0013 u	ppm	0.0040	> 100.00	1.2180	-0.0013 u (ppm)
Se (196.026 nm)	0.0112 Z	ppm	0.0087	78.11	8.3630 Z	0.0112 Z (ppm)
Si (251.611 nm)	0.0031	ppm	0.0023	74.09	7.0320	0.0031 (ppm)
Sn (189.925 nm)	0.0006 u	ppm	0.0023	> 100.00	0.0051	0.0006 u (ppm)
Sr (421.552 nm)	0.0003	ppm	0.0001	45.11	62.5200	0.0003 (ppm)
Ti (336.122 nm)	0.0046	ppm	0.0005	11.05	307.2000	0.0046 (ppm)
Tl (190.794 nm)	0.0044	ppm	0.0027	61.47	10.2800	0.0044 (ppm)
V (292.401 nm)	0.0004	ppm	0.0004	> 100.00	85.6200	0.0004 (ppm)
W (207.912 nm)	0.0104	ppm	0.0000	0.43	11.0900	0.0104 (ppm)
Zn (202.548 nm)	0.0007	ppm	0.0002	24.21	19.9900	0.0007 (ppm)
Zr (343.823 nm)	0.0006	ppm	0.0003	43.69	862.0000	0.0006 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9753	369100.0000	0.0044	0.45
Y_R 371.029	0.9652	48960.0000	0.0026	0.27

Sample Name: 440-259135-C-2-A@5

Date: 1/15/2020 6:52:59 PM

Rack:Tube: 2:35

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.0035	ppm	0.0001	2.84	-152.9000	0.0035 (ppm)
Al (396.152 nm)	133.1000	ppm	0.3256	0.24	4032000.0000	133.1000 (ppm)
As (188.980 nm)	0.1656	ppm	0.0016	0.97	87.3600	0.1656 (ppm)
B (249.678 nm)	0.0396	ppm	0.0004	0.95	176.3000	0.0396 (ppm)
Ba (233.527 nm)	1.6640	ppm	0.0002	0.01	142200.0000	1.6640 (ppm)
Be (234.861 nm)	0.0087	ppm	0.0003	4.00	4422.0000	0.0087 (ppm)
Ca (422.673 nm)	41.4900	ppm	0.0607	0.15	161800.0000	41.4900 (ppm)
Cd (214.439 nm)	0.0056	ppm	0.0005	8.27	147.2000	0.0056 (ppm)
Co (228.615 nm)	0.0932	ppm	0.0014	1.45	1355.0000	0.0932 (ppm)
Cr (205.560 nm)	0.2102	ppm	0.0000	0.00	939.4000	0.2102 (ppm)
Cu (324.754 nm)	0.2250	ppm	0.0001	0.04	9036.0000	0.2250 (ppm)
Fe (238.204 nm)	197.9000	ppm	0.2372	0.12	499500.0000	197.9000 (ppm)
K (766.491 nm)	19.1900	ppm	0.0423	0.22	19510.0000	19.1900 (ppm)
Li (670.783 nm)	0.1161	ppm	0.0007	0.62	6174.0000	0.1161 (ppm)
Mg (279.078 nm)	49.1300	ppm	0.0266	0.05	132500.0000	49.1300 (ppm)
Mn (259.372 nm)	4.1320	ppm	0.0013	0.03	403700.0000	4.1320 (ppm)
Mo (204.598 nm)	0.0091	ppm	0.0006	6.30	50.3900	0.0091 (ppm)
Na (589.592 nm)	5.6560	ppm	0.0203	0.36	32330.0000	5.6560 (ppm)
Ni (231.604 nm)	0.1728	ppm	0.0018	1.06	735.8000	0.1728 (ppm)
P (213.618 nm)	3.5970	ppm	0.0441	1.23	2689.0000	3.5970 (ppm)
Pb (220.353 nm)	0.1254	ppm	0.0007	0.52	164.7000	0.1254 (ppm)
Sb (206.834 nm)	0.0121	ppm	0.0149	> 100.00	16.9900	0.0121 (ppm)
Se (196.026 nm)	0.0103	ppm	0.0079	77.26	-36.4500	0.0103 (ppm)
Si (251.611 nm)	1.0020	ppm	0.0009	0.09	2139.0000	1.0020 (ppm)
Sn (189.925 nm)	0.0006 u	ppm	0.0048	> 100.00	-0.1230	0.0006 u (ppm)
Sr (421.552 nm)	0.3307	ppm	0.0001	0.03	114800.0000	0.3307 (ppm)
Ti (336.122 nm)	6.0990	ppm	0.0171	0.28	612200.0000	6.0990 (ppm)
Tl (190.794 nm)	-0.0525 u	ppm	0.0029	5.59	-110.6000	-0.0525 u (ppm)
V (292.401 nm)	0.3687	ppm	0.0003	0.07	11540.0000	0.3687 (ppm)
W (207.912 nm)	0.0042	ppm	0.0035	83.33	4.8570	0.0042 (ppm)
Zn (202.548 nm)	0.5775	ppm	0.0004	0.08	8848.0000	0.5775 (ppm)
Zr (343.823 nm)	0.0708	ppm	0.0006	0.82	2525.0000	0.0708 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9447	357600.0000	0.0013	0.14
Y_R 371.029	0.9526	48320.0000	0.0012	0.13

Sample Name: 440-259135-C-3-A@5

Date: 1/15/2020 6:56:11 PM

Rack:Tube: 2:36

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.0010	ppm	0.0000	2.23	-203.4000	0.0010 (ppm)
Al (396.152 nm)	110.3000	ppm	0.2494	0.23	3342000.0000	110.3000 (ppm)
As (188.980 nm)	0.1506	ppm	0.0035	2.33	79.9100	0.1506 (ppm)
B (249.678 nm)	0.0289	ppm	0.0003	1.09	92.9800	0.0289 (ppm)
Ba (233.527 nm)	1.4510	ppm	0.0026	0.18	124100.0000	1.4510 (ppm)
Be (234.861 nm)	0.0035	ppm	0.0001	3.25	3190.0000	0.0035 (ppm)
Ca (422.673 nm)	28.6600	ppm	0.1108	0.39	111800.0000	28.6600 (ppm)
Cd (214.439 nm)	0.0015	ppm	0.0001	3.73	53.7900	0.0015 (ppm)
Co (228.615 nm)	0.0758	ppm	0.0022	2.86	1090.0000	0.0758 (ppm)
Cr (205.560 nm)	0.1764	ppm	0.0008	0.47	788.6000	0.1764 (ppm)
Cu (324.754 nm)	0.1888	ppm	0.0001	0.08	7607.0000	0.1888 (ppm)
Fe (238.204 nm)	170.5000	ppm	0.7762	0.46	430400.0000	170.5000 (ppm)
K (766.491 nm)	15.8900	ppm	0.0057	0.04	16130.0000	15.8900 (ppm)
Li (670.783 nm)	0.0898	ppm	0.0021	2.33	4673.0000	0.0898 (ppm)
Mg (279.078 nm)	37.9800	ppm	0.0528	0.14	102500.0000	37.9800 (ppm)
Mn (259.372 nm)	4.3200	ppm	0.0115	0.27	418100.0000	4.3200 (ppm)
Mo (204.598 nm)	0.0018	ppm	0.0003	17.81	19.5900	0.0018 (ppm)
Na (589.592 nm)	4.4430	ppm	0.0152	0.34	25710.0000	4.4430 (ppm)
Ni (231.604 nm)	0.1391	ppm	0.0008	0.54	589.3000	0.1391 (ppm)
P (213.618 nm)	2.2820	ppm	0.0136	0.60	1707.0000	2.2820 (ppm)
Pb (220.353 nm)	0.1306	ppm	0.0005	0.39	188.8000	0.1306 (ppm)
Sb (206.834 nm)	0.0113	ppm	0.0118	> 100.00	15.5600	0.0113 (ppm)
Se (196.026 nm)	0.0024 u	ppm	0.0055	> 100.00	-34.8300	0.0024 u (ppm)
Si (251.611 nm)	0.8569	ppm	0.0005	0.06	1821.0000	0.8569 (ppm)
Sn (189.925 nm)	0.0027	ppm	0.0028	> 100.00	1.2060	0.0027 (ppm)
Sr (421.552 nm)	0.2457	ppm	0.0011	0.45	85300.0000	0.2457 (ppm)
Ti (336.122 nm)	4.4530	ppm	0.0116	0.26	446900.0000	4.4530 (ppm)
Tl (190.794 nm)	-0.0429 u	ppm	0.0024	5.53	-80.9500	-0.0429 u (ppm)
V (292.401 nm)	0.3073	ppm	0.0010	0.31	9612.0000	0.3073 (ppm)
W (207.912 nm)	0.0035	ppm	0.0020	56.30	4.3460	0.0035 (ppm)
Zn (202.548 nm)	0.5721	ppm	0.0005	0.09	8771.0000	0.5721 (ppm)
Zr (343.823 nm)	0.0586	ppm	0.0006	1.08	2089.0000	0.0586 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9498	359500.0000	0.0011	0.12
Y_R 371.029	0.9615	48770.0000	0.0021	0.22

Sample Name: 440-259135-C-4-A@5

Date: 1/15/2020 6:59:23 PM

Rack:Tube: 2:37

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0004 u	ppm	0.0002	43.69	-286.3000	-0.0004 u (ppm)
Al (396.152 nm)	102.5000	ppm	0.0671	0.07	3108000.0000	102.5000 (ppm)
As (188.980 nm)	1.7610	ppm	0.0018	0.10	1059.0000	1.7610 (ppm)
B (249.678 nm)	0.0481	ppm	0.0004	0.93	282.4000	0.0481 (ppm)
Ba (233.527 nm)	1.3230	ppm	0.0018	0.14	113100.0000	1.3230 (ppm)
Be (234.861 nm)	0.0025	ppm	0.0001	2.48	3212.0000	0.0025 (ppm)
Ca (422.673 nm)	51.9500	ppm	0.0343	0.07	202600.0000	51.9500 (ppm)
Cd (214.439 nm)	0.0059	ppm	0.0000	0.21	150.5000	0.0059 (ppm)
Co (228.615 nm)	0.0572	ppm	0.0012	2.02	864.5000	0.0572 (ppm)
Cr (205.560 nm)	0.1989	ppm	0.0002	0.13	888.9000	0.1989 (ppm)
Cu (324.754 nm)	0.2133	ppm	0.0001	0.04	8557.0000	0.2133 (ppm)
Fe (238.204 nm)	182.0000	ppm	0.5073	0.28	459300.0000	182.0000 (ppm)
K (766.491 nm)	17.9400	ppm	0.0043	0.02	18220.0000	17.9400 (ppm)
Li (670.783 nm)	0.1111	ppm	0.0006	0.58	5857.0000	0.1111 (ppm)
Mg (279.078 nm)	43.8900	ppm	0.0441	0.10	118400.0000	43.8900 (ppm)
Mn (259.372 nm)	2.4960	ppm	0.0015	0.06	250900.0000	2.4960 (ppm)
Mo (204.598 nm)	0.0067	ppm	0.0004	6.17	38.1000	0.0067 (ppm)
Na (589.592 nm)	2.1830	ppm	0.0027	0.12	13890.0000	2.1830 (ppm)
Ni (231.604 nm)	0.1831	ppm	0.0030	1.62	782.1000	0.1831 (ppm)
P (213.618 nm)	3.2510	ppm	0.0349	1.07	2430.0000	3.2510 (ppm)
Pb (220.353 nm)	0.4847	ppm	0.0004	0.08	884.1000	0.4847 (ppm)
Sb (206.834 nm)	0.0126	ppm	0.0055	43.31	17.1500	0.0126 (ppm)
Se (196.026 nm)	0.0102	ppm	0.0014	13.35	-33.1900	0.0102 (ppm)
Si (251.611 nm)	1.4220	ppm	0.0043	0.30	3011.0000	1.4220 (ppm)
Sn (189.925 nm)	0.0002 u	ppm	0.0024	> 100.00	-0.2955	0.0002 u (ppm)
Sr (421.552 nm)	0.3049	ppm	0.0004	0.14	106000.0000	0.3049 (ppm)
Ti (336.122 nm)	5.0350	ppm	0.0006	0.01	505300.0000	5.0350 (ppm)
Tl (190.794 nm)	-0.0475 u	ppm	0.0042	8.79	-95.0600	-0.0475 u (ppm)
V (292.401 nm)	0.3088	ppm	0.0004	0.15	9697.0000	0.3088 (ppm)
W (207.912 nm)	0.0383	ppm	0.0044	11.43	77.4200	0.0383 (ppm)
Zn (202.548 nm)	1.8320	ppm	0.0007	0.04	28150.0000	1.8320 (ppm)
Zr (343.823 nm)	0.0718	ppm	0.0012	1.63	2936.0000	0.0718 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9488	359100.0000	0.0024	0.25
Y_R 371.029	0.9591	48650.0000	0.0017	0.18

Sample Name: 440-259135-C-5-A@5

Date: 1/15/2020 7:02:33 PM

Rack:Tube: 2:38

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.0000 u	ppm	0.0005	> 100.00	-196.7000	0.0000 u (ppm)
Al (396.152 nm)	97.4200	ppm	0.0622	0.06	2952000.0000	97.4200 (ppm)
As (188.980 nm)	0.4200	ppm	0.0040	0.95	245.7000	0.4200 (ppm)
B (249.678 nm)	0.0361	ppm	0.0012	3.34	220.6000	0.0361 (ppm)
Ba (233.527 nm)	1.5890	ppm	0.0194	1.22	135800.0000	1.5890 (ppm)
Be (234.861 nm)	0.0025	ppm	0.0001	2.79	2394.0000	0.0025 (ppm)
Ca (422.673 nm)	246.1000	ppm	2.3340	0.95	959400.0000	246.1000 (ppm)
Cd (214.439 nm)	0.0036	ppm	0.0002	4.30	92.3200	0.0036 (ppm)
Co (228.615 nm)	0.0456	ppm	0.0014	3.04	704.0000	0.0456 (ppm)
Cr (205.560 nm)	0.1290	ppm	0.0005	0.35	580.3000	0.1290 (ppm)
Cu (324.754 nm)	0.1535	ppm	0.0014	0.90	6047.0000	0.1535 (ppm)
Fe (238.204 nm)	129.4000	ppm	0.5288	0.41	326500.0000	129.4000 (ppm)
K (766.491 nm)	15.0300	ppm	0.0280	0.19	15270.0000	15.0300 (ppm)
Li (670.783 nm)	0.0705	ppm	0.0013	1.80	4051.0000	0.0705 (ppm)
Mg (279.078 nm)	33.5300	ppm	0.4506	1.34	90460.0000	33.5300 (ppm)
Mn (259.372 nm)	2.5620	ppm	0.0026	0.10	251100.0000	2.5620 (ppm)
Mo (204.598 nm)	0.0043	ppm	0.0016	37.32	27.3300	0.0043 (ppm)
Na (589.592 nm)	3.3690	ppm	0.0117	0.35	19770.0000	3.3690 (ppm)
Ni (231.604 nm)	0.1056	ppm	0.0017	1.56	442.0000	0.1056 (ppm)
P (213.618 nm)	3.3270	ppm	0.0261	0.78	2485.0000	3.3270 (ppm)
Pb (220.353 nm)	0.1606	ppm	0.0019	1.18	265.9000	0.1606 (ppm)
Sb (206.834 nm)	0.0043	ppm	0.0059	> 100.00	9.6540	0.0043 (ppm)
Se (196.026 nm)	0.0072 u	ppm	0.0144	> 100.00	-24.0700	0.0072 u (ppm)
Si (251.611 nm)	1.0310	ppm	0.0011	0.11	2199.0000	1.0310 (ppm)
Sn (189.925 nm)	0.0015 u	ppm	0.0023	> 100.00	0.4484	0.0015 u (ppm)
Sr (421.552 nm)	0.6096	ppm	0.0001	0.01	213400.0000	0.6096 (ppm)
Ti (336.122 nm)	4.7180	ppm	0.0025	0.05	473400.0000	4.7180 (ppm)
Tl (190.794 nm)	-0.0414 u	ppm	0.0032	7.77	-88.5900	-0.0414 u (ppm)
V (292.401 nm)	0.2315	ppm	0.0008	0.34	7560.0000	0.2315 (ppm)
W (207.912 nm)	0.0130	ppm	0.0015	11.46	26.5800	0.0130 (ppm)
Zn (202.548 nm)	1.2860	ppm	0.0020	0.16	19710.0000	1.2860 (ppm)
Zr (343.823 nm)	0.0593	ppm	0.0001	0.24	3018.0000	0.0593 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9257	350400.0000	0.0003	0.03
Y_R 371.029	0.9469	48030.0000	0.0127	1.35

Sample Name: 440-259135-C-6-A@5

Date: 1/15/2020 7:05:43 PM

Rack:Tube: 2:39

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.0040	ppm	0.0001	2.34	-144.5000	0.0040 (ppm)
Al (396.152 nm)	139.0000	ppm	0.2049	0.15	4213000.0000	139.0000 (ppm)
As (188.980 nm)	0.1225	ppm	0.0019	1.58	60.9600	0.1225 (ppm)
B (249.678 nm)	0.0378	ppm	0.0001	0.23	154.2000	0.0378 (ppm)
Ba (233.527 nm)	1.8010	ppm	0.0117	0.65	153900.0000	1.8010 (ppm)
Be (234.861 nm)	0.0049	ppm	0.0001	1.90	3856.0000	0.0049 (ppm)
Ca (422.673 nm)	42.4200	ppm	0.0563	0.13	165400.0000	42.4200 (ppm)
Cd (214.439 nm)	0.0011	ppm	0.0004	40.45	48.8700	0.0011 (ppm)
Co (228.615 nm)	0.0816	ppm	0.0028	3.42	1227.0000	0.0816 (ppm)
Cr (205.560 nm)	0.2138	ppm	0.0007	0.33	955.8000	0.2138 (ppm)
Cu (324.754 nm)	0.2325	ppm	0.0001	0.04	9340.0000	0.2325 (ppm)
Fe (238.204 nm)	200.0000	ppm	0.4146	0.21	504700.0000	200.0000 (ppm)
K (766.491 nm)	19.2800	ppm	0.0804	0.42	19600.0000	19.2800 (ppm)
Li (670.783 nm)	0.1142	ppm	0.0009	0.82	6091.0000	0.1142 (ppm)
Mg (279.078 nm)	47.9600	ppm	0.3004	0.63	129400.0000	47.9600 (ppm)
Mn (259.372 nm)	3.9240	ppm	0.0006	0.02	384700.0000	3.9240 (ppm)
Mo (204.598 nm)	0.0020	ppm	0.0008	36.99	24.0900	0.0020 (ppm)
Na (589.592 nm)	5.0330	ppm	0.0215	0.43	29060.0000	5.0330 (ppm)
Ni (231.604 nm)	0.1627	ppm	0.0010	0.62	691.5000	0.1627 (ppm)
P (213.618 nm)	3.5790	ppm	0.0301	0.84	2676.0000	3.5790 (ppm)
Pb (220.353 nm)	0.1289	ppm	0.0024	1.87	169.5000	0.1289 (ppm)
Sb (206.834 nm)	0.0104	ppm	0.0004	4.05	15.8000	0.0104 (ppm)
Se (196.026 nm)	0.0166	ppm	0.0040	24.34	-33.2900	0.0166 (ppm)
Si (251.611 nm)	1.0150	ppm	0.0050	0.49	2171.0000	1.0150 (ppm)
Sn (189.925 nm)	0.0043	ppm	0.0032	75.35	1.9690	0.0043 (ppm)
Sr (421.552 nm)	0.3332	ppm	0.0001	0.03	115700.0000	0.3332 (ppm)
Ti (336.122 nm)	7.0260	ppm	0.0016	0.02	705200.0000	7.0260 (ppm)
Tl (190.794 nm)	-0.0667 u	ppm	0.0011	1.65	-138.0000	-0.0667 u (ppm)
V (292.401 nm)	0.3738	ppm	0.0005	0.14	11730.0000	0.3738 (ppm)
W (207.912 nm)	0.0026	ppm	0.0028	> 100.00	2.6200	0.0026 (ppm)
Zn (202.548 nm)	0.6165	ppm	0.0006	0.09	9447.0000	0.6165 (ppm)
Zr (343.823 nm)	0.0684	ppm	0.0003	0.39	2285.0000	0.0684 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9463	358100.0000	0.0008	0.09
Y_R 371.029	0.9653	48960.0000	0.0057	0.59

Sample Name: 440-258676-D-1-H@5

Date: 1/15/2020 7:08:55 PM

Rack:Tube: 2:40

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.0003	ppm	0.0001	51.88	-170.9000	0.0003 (ppm)
Al (396.152 nm)	79.3000	ppm	0.2292	0.29	2403000.0000	79.3000 (ppm)
As (188.980 nm)	0.0543	ppm	0.0013	2.33	23.9000	0.0543 (ppm)
B (249.678 nm)	0.0137	ppm	0.0002	1.37	-17.2600	0.0137 (ppm)
Ba (233.527 nm)	0.3625	ppm	0.0002	0.07	31050.0000	0.3625 (ppm)
Be (234.861 nm)	0.0017	ppm	0.0000	2.84	2241.0000	0.0017 (ppm)
Ca (422.673 nm)	29.5100	ppm	0.0937	0.32	115100.0000	29.5100 (ppm)
Cd (214.439 nm)	0.0009	ppm	0.0001	12.31	33.7000	0.0009 (ppm)
Co (228.615 nm)	0.0508	ppm	0.0007	1.48	795.2000	0.0508 (ppm)
Cr (205.560 nm)	0.1232	ppm	0.0007	0.55	551.6000	0.1232 (ppm)
Cu (324.754 nm)	0.1259	ppm	0.0001	0.07	5138.0000	0.1259 (ppm)
Fe (238.204 nm)	126.9000	ppm	0.3998	0.32	320200.0000	126.9000 (ppm)
K (766.491 nm)	14.6100	ppm	0.0450	0.31	14820.0000	14.6100 (ppm)
Li (670.783 nm)	0.1064	ppm	0.0011	1.00	5892.0000	0.1064 (ppm)
Mg (279.078 nm)	37.7100	ppm	0.0045	0.01	101700.0000	37.7100 (ppm)
Mn (259.372 nm)	2.0210	ppm	0.0042	0.21	200900.0000	2.0210 (ppm)
Mo (204.598 nm)	0.0033	ppm	0.0020	60.15	21.9100	0.0033 (ppm)
Na (589.592 nm)	0.5656	ppm	0.0099	1.75	4919.0000	0.5656 (ppm)
Ni (231.604 nm)	0.1229	ppm	0.0023	1.87	520.9000	0.1229 (ppm)
P (213.618 nm)	6.4880	ppm	0.0418	0.64	4845.0000	6.4880 (ppm)
Pb (220.353 nm)	0.2617	ppm	0.0029	1.10	465.8000	0.2617 (ppm)
Sb (206.834 nm)	0.0001 u	ppm	0.0031	> 100.00	5.3400	0.0001 u (ppm)
Se (196.026 nm)	0.0101	ppm	0.0076	75.41	-21.0600	0.0101 (ppm)
Si (251.611 nm)	1.1560	ppm	0.0034	0.29	2457.0000	1.1560 (ppm)
Sn (189.925 nm)	0.0364	ppm	0.0040	10.90	20.4300	0.0364 (ppm)
Sr (421.552 nm)	0.1905	ppm	0.0004	0.20	66210.0000	0.1905 (ppm)
Ti (336.122 nm)	5.9300	ppm	0.0165	0.28	595200.0000	5.9300 (ppm)
Tl (190.794 nm)	-0.0564 u	ppm	0.0011	1.89	-119.1000	-0.0564 u (ppm)
V (292.401 nm)	0.2200	ppm	0.0005	0.21	6985.0000	0.2200 (ppm)
W (207.912 nm)	0.0033	ppm	0.0025	75.63	3.4240	0.0033 (ppm)
Zn (202.548 nm)	0.4754	ppm	0.0004	0.08	7296.0000	0.4754 (ppm)
Zr (343.823 nm)	0.0469	ppm	0.0014	2.98	2025.0000	0.0469 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9486	359000.0000	0.0036	0.38
Y_R 371.029	0.9526	48320.0000	0.0014	0.15

Sample Name: xRINSE 6043786

Date: 1/15/2020 7:12:05 PM

Rack:Tube: S1:8

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0001 u	ppm	0.0001	85.00	40.0300	-0.0001 u (ppm)
Al (396.152 nm)	0.0545	ppm	0.0227	41.67	1326.0000	0.0545 (ppm)
As (188.980 nm)	0.0043	ppm	0.0005	10.59	1.2590	0.0043 (ppm)
B (249.678 nm)	0.0002	ppm	0.0002	79.43	-10.1700	0.0002 (ppm)
Ba (233.527 nm)	0.0006	ppm	0.0001	22.61	109.6000	0.0006 (ppm)
Be (234.861 nm)	0.0000	ppm	0.0000	2.63	17.3700	0.0000 (ppm)
Ca (422.673 nm)	0.0203	ppm	0.0148	72.87	159.3000	0.0203 (ppm)
Cd (214.439 nm)	0.0000 u	ppm	0.0002	> 100.00	-7.3830	0.0000 u (ppm)
Co (228.615 nm)	-0.0001 u	ppm	0.0000	13.12	-10.4300	-0.0001 u (ppm)
Cr (205.560 nm)	0.0004	ppm	0.0001	33.51	2.4200	0.0004 (ppm)
Cu (324.754 nm)	0.0004	ppm	0.0001	34.58	149.6000	0.0004 (ppm)
Fe (238.204 nm)	0.0544	ppm	0.0022	4.11	81.8000	0.0544 (ppm)
K (766.491 nm)	-0.0281 u	ppm	0.1005	> 100.00	-154.4000	-0.0281 u (ppm)
Li (670.783 nm)	0.0021	ppm	0.0002	7.22	247.7000	0.0021 (ppm)
Mg (279.078 nm)	0.0261 Z	ppm	0.0110	42.30	84.6800 Z	0.0261 Z (ppm)
Mn (259.372 nm)	0.0016	ppm	0.0007	41.28	195.8000	0.0016 (ppm)
Mo (204.598 nm)	0.0004	ppm	0.0005	> 100.00	-0.2792	0.0004 (ppm)
Na (589.592 nm)	-0.0805 u	ppm	0.0032	3.93	477.2000	-0.0805 u (ppm)
Ni (231.604 nm)	-0.0002 u	ppm	0.0002	75.27	-13.0300	-0.0002 u (ppm)
P (213.618 nm)	0.0049 u	ppm	0.0086	> 100.00	7.7540	0.0049 u (ppm)
Pb (220.353 nm)	-0.0015 u	ppm	0.0020	> 100.00	5.6930	-0.0015 u (ppm)
Sb (206.834 nm)	0.0037	ppm	0.0025	68.56	5.8570	0.0037 (ppm)
Se (196.026 nm)	0.0047	ppm	0.0055	> 100.00	4.3610	0.0047 (ppm)
Si (251.611 nm)	0.0008 u	ppm	0.0037	> 100.00	0.7149	0.0008 u (ppm)
Sn (189.925 nm)	-0.0031 u	ppm	0.0021	67.66	-2.1620	-0.0031 u (ppm)
Sr (421.552 nm)	0.0000 u	ppm	0.0001	> 100.00	-32.8100	0.0000 u (ppm)
Ti (336.122 nm)	0.0065 Z	ppm	0.0007	11.10	493.6000 Z	0.0065 Z (ppm)
Tl (190.794 nm)	0.0018	ppm	0.0006	33.32	7.4850	0.0018 (ppm)
V (292.401 nm)	0.0001 u	ppm	0.0001	> 100.00	77.8200	0.0001 u (ppm)
W (207.912 nm)	0.0028	ppm	0.0003	9.16	-1.2170	0.0028 (ppm)
Zn (202.548 nm)	0.0011	ppm	0.0002	15.35	25.0000	0.0011 (ppm)
Zr (343.823 nm)	0.0005	ppm	0.0000	9.28	853.3000	0.0005 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9753	369100.0000	0.0006	0.06
Y_R 371.029	0.9682	49110.0000	0.0057	0.58

Sample Name: CCV 6043773

Date: 1/15/2020 7:15:18 PM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.4902	ppm	0.0015	0.30	19790.0000	0.4902 (ppm)
Al (396.152 nm)	0.9796	ppm	0.0004	0.05	30450.0000	0.9796 (ppm)
As (188.980 nm)	0.9807	ppm	0.0015	0.15	588.0000	0.9807 (ppm)
B (249.678 nm)	0.9792	ppm	0.0026	0.27	10350.0000	0.9792 (ppm)
Ba (233.527 nm)	1.0030	ppm	0.0038	0.38	85720.0000	1.0030 (ppm)
Be (234.861 nm)	0.9848	ppm	0.0014	0.15	154500.0000	0.9848 (ppm)
Ca (422.673 nm)	4.9380	ppm	0.0184	0.37	19330.0000	4.9380 (ppm)
Cd (214.439 nm)	0.9840	ppm	0.0004	0.04	21240.0000	0.9840 (ppm)
Co (228.615 nm)	0.9781	ppm	0.0006	0.06	12640.0000	0.9781 (ppm)
Cr (205.560 nm)	0.9830	ppm	0.0031	0.32	4363.0000	0.9830 (ppm)
Cu (324.754 nm)	0.9881	ppm	0.0045	0.45	38780.0000	0.9881 (ppm)
Fe (238.204 nm)	1.0160	ppm	0.0000	0.00	2508.0000	1.0160 (ppm)
K (766.491 nm)	9.8700	ppm	0.0119	0.12	9941.0000	9.8700 (ppm)
Li (670.783 nm)	0.9922	ppm	0.0037	0.37	56510.0000	0.9922 (ppm)
Mg (279.078 nm)	5.0400	ppm	0.0278	0.55	13620.0000	5.0400 (ppm)
Mn (259.372 nm)	0.9823	ppm	0.0008	0.09	91320.0000	0.9823 (ppm)
Mo (204.598 nm)	0.9773	ppm	0.0055	0.56	3764.0000	0.9773 (ppm)
Na (589.592 nm)	9.8840	ppm	0.0104	0.11	53080.0000	9.8840 (ppm)
Ni (231.604 nm)	0.9815	ppm	0.0009	0.09	4294.0000	0.9815 (ppm)
P (213.618 nm)	0.9947	ppm	0.0052	0.52	702.9000	0.9947 (ppm)
Pb (220.353 nm)	0.9829	ppm	0.0019	0.19	1949.0000	0.9829 (ppm)
Sb (206.834 nm)	0.9751	ppm	0.0243	2.49	855.3000	0.9751 (ppm)
Se (196.026 nm)	0.9817	ppm	0.0057	0.58	604.4000	0.9817 (ppm)
Si (251.611 nm)	4.9110	ppm	0.0336	0.69	10390.0000	4.9110 (ppm)
Sn (189.925 nm)	0.9860	ppm	0.0049	0.49	568.5000	0.9860 (ppm)
Sr (421.552 nm)	0.9832	ppm	0.0018	0.19	340000.0000	0.9832 (ppm)
Ti (336.122 nm)	1.0010	ppm	0.0040	0.40	100300.0000	1.0010 (ppm)
Tl (190.794 nm)	0.9840	ppm	0.0013	0.14	1065.0000	0.9840 (ppm)
V (292.401 nm)	0.9846	ppm	0.0009	0.10	29930.0000	0.9846 (ppm)
W (207.912 nm)	0.9879	ppm	0.0011	0.12	1614.0000	0.9879 (ppm)
Zn (202.548 nm)	0.9859	ppm	0.0032	0.32	15290.0000	0.9859 (ppm)
Zr (343.823 nm)	0.9618	ppm	0.0050	0.52	78600.0000	0.9618 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9635	364700.0000	0.0015	0.16
Y_R 371.029	0.9541	48390.0000	0.0065	0.68

Sample Name: CCB 6043772

Date: 1/15/2020 7:18:29 PM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0001 u	ppm	0.0006	> 100.00	40.1800	-0.0001 u (ppm)
Al (396.152 nm)	0.0001 u	ppm	0.0006	> 100.00	-320.2000	0.0001 u (ppm)
As (188.980 nm)	0.0050	ppm	0.0029	58.25	1.7050	0.0050 (ppm)
B (249.678 nm)	0.0015	ppm	0.0013	91.71	2.6060	0.0015 (ppm)
Ba (233.527 nm)	0.0004	ppm	0.0000	11.60	92.5300	0.0004 (ppm)
Be (234.861 nm)	0.0003	ppm	0.0001	24.78	57.5900	0.0003 (ppm)
Ca (422.673 nm)	-0.0016 u	ppm	0.0117	> 100.00	74.0900	-0.0016 u (ppm)
Cd (214.439 nm)	0.0002	ppm	0.0000	14.22	-2.7370	0.0002 (ppm)
Co (228.615 nm)	0.0006	ppm	0.0002	34.16	-0.6818	0.0006 (ppm)
Cr (205.560 nm)	0.0005	ppm	0.0001	25.33	2.7430	0.0005 (ppm)
Cu (324.754 nm)	0.0006	ppm	0.0003	59.11	156.6000	0.0006 (ppm)
Fe (238.204 nm)	0.0010 u	ppm	0.0038	> 100.00	-53.1500	0.0010 u (ppm)
K (766.491 nm)	-0.0529 u	ppm	0.0365	69.04	-179.6000	-0.0529 u (ppm)
Li (670.783 nm)	0.0012 u	ppm	0.0019	> 100.00	195.2000	0.0012 u (ppm)
Mg (279.078 nm)	0.0036	ppm	0.0011	30.84	24.0300	0.0036 (ppm)
Mn (259.372 nm)	0.0004	ppm	0.0000	5.95	82.6400	0.0004 (ppm)
Mo (204.598 nm)	0.0039	ppm	0.0013	33.92	13.3000	0.0039 (ppm)
Na (589.592 nm)	-0.0882 u	ppm	0.0055	6.22	436.2000	-0.0882 u (ppm)
Ni (231.604 nm)	-0.0001 u	ppm	0.0007	> 100.00	-12.3000	-0.0001 u (ppm)
P (213.618 nm)	-0.0015 u	ppm	0.0024	> 100.00	2.8730	-0.0015 u (ppm)
Pb (220.353 nm)	-0.0008 u	ppm	0.0008	98.11	7.0640	-0.0008 u (ppm)
Sb (206.834 nm)	0.0019 u	ppm	0.0092	> 100.00	4.1950	0.0019 u (ppm)
Se (196.026 nm)	0.0053	ppm	0.0013	25.12	4.7540	0.0053 (ppm)
Si (251.611 nm)	0.0008	ppm	0.0002	24.77	1.5570	0.0008 (ppm)
Sn (189.925 nm)	-0.0013 u	ppm	0.0001	11.85	-1.0740	-0.0013 u (ppm)
Sr (421.552 nm)	0.0000 u	ppm	0.0002	> 100.00	-33.8500	0.0000 u (ppm)
Ti (336.122 nm)	0.0024	ppm	0.0005	19.12	80.2700	0.0024 (ppm)
Tl (190.794 nm)	0.0037	ppm	0.0043	> 100.00	9.6210	0.0037 (ppm)
V (292.401 nm)	0.0002	ppm	0.0001	32.89	79.4900	0.0002 (ppm)
W (207.912 nm)	0.0058	ppm	0.0004	6.60	3.6730	0.0058 (ppm)
Zn (202.548 nm)	0.0006	ppm	0.0000	8.33	17.5800	0.0006 (ppm)
Zr (343.823 nm)	0.0006	ppm	0.0003	41.57	865.3000	0.0006 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9756	369300.0000	0.0006	0.07
Y_R 371.029	0.9617	48780.0000	0.0080	0.83

Sample Name: MB 440-590692/1-A

Date: 1/15/2020 7:21:41 PM

Rack:Tube: 2:41

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0006 u	ppm	0.0003	47.75	21.7200	-0.0006 u (ppm)
Al (396.152 nm)	0.0051	ppm	0.0003	5.28	-171.9000	0.0051 (ppm)
As (188.980 nm)	0.0059	ppm	0.0075	> 100.00	2.2870	0.0059 (ppm)
B (249.678 nm)	0.0000 u	ppm	0.0002	> 100.00	-12.8400	0.0000 u (ppm)
Ba (233.527 nm)	0.0001	ppm	0.0000	37.30	67.7800	0.0001 (ppm)
Be (234.861 nm)	0.0000 u	ppm	0.0000	35.91	10.1300	0.0000 u (ppm)
Ca (422.673 nm)	0.0185	ppm	0.0014	7.79	152.5000	0.0185 (ppm)
Cd (214.439 nm)	0.0001	ppm	0.0001	> 100.00	-4.2800	0.0001 (ppm)
Co (228.615 nm)	-0.0005 u	ppm	0.0004	82.70	-15.0000	-0.0005 u (ppm)
Cr (205.560 nm)	0.0000 u	ppm	0.0003	> 100.00	0.3979	0.0000 u (ppm)
Cu (324.754 nm)	0.0009	ppm	0.0001	7.30	167.9000	0.0009 (ppm)
Fe (238.204 nm)	-0.0008 u	ppm	0.0018	> 100.00	-57.6000	-0.0008 u (ppm)
K (766.491 nm)	0.0552 u	ppm	0.1141	> 100.00	-69.5400	0.0552 u (ppm)
Li (670.783 nm)	0.0014 u	ppm	0.0023	> 100.00	204.6000	0.0014 u (ppm)
Mg (279.078 nm)	0.0018	ppm	0.0020	> 100.00	19.3000	0.0018 (ppm)
Mn (259.372 nm)	0.0005	ppm	0.0000	6.95	89.1700	0.0005 (ppm)
Mo (204.598 nm)	0.0003 u	ppm	0.0011	> 100.00	-0.4944	0.0003 u (ppm)
Na (589.592 nm)	-0.0822 u	ppm	0.0065	7.92	467.7000	-0.0822 u (ppm)
Ni (231.604 nm)	0.0001	ppm	0.0001	59.64	-11.5700	0.0001 (ppm)
P (213.618 nm)	-0.0050 u	ppm	0.0013	26.37	0.3412	-0.0050 u (ppm)
Pb (220.353 nm)	-0.0005 u	ppm	0.0008	> 100.00	7.7960	-0.0005 u (ppm)
Sb (206.834 nm)	-0.0034 u	ppm	0.0033	94.48	-0.4721	-0.0034 u (ppm)
Se (196.026 nm)	-0.0025 u	ppm	0.0037	> 100.00	-0.0203	-0.0025 u (ppm)
Si (251.611 nm)	0.0008 u	ppm	0.0034	> 100.00	1.2100	0.0008 u (ppm)
Sn (189.925 nm)	0.0005 u	ppm	0.0006	> 100.00	-0.0882	0.0005 u (ppm)
Sr (421.552 nm)	0.0000 u	ppm	0.0000	39.46	-45.9300	0.0000 u (ppm)
Ti (336.122 nm)	0.0004	ppm	0.0003	79.29	-120.2000	0.0004 (ppm)
Tl (190.794 nm)	0.0019 u	ppm	0.0038	> 100.00	7.5750	0.0019 u (ppm)
V (292.401 nm)	0.0001 u	ppm	0.0005	> 100.00	79.5600	0.0001 u (ppm)
W (207.912 nm)	0.0002 u	ppm	0.0027	> 100.00	-5.4980	0.0002 u (ppm)
Zn (202.548 nm)	0.0059	ppm	0.0001	1.43	99.4400	0.0059 (ppm)
Zr (343.823 nm)	0.0003	ppm	0.0000	7.96	836.7000	0.0003 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9839	372400.0000	0.0002	0.02
Y_R 371.029	0.9720	49300.0000	0.0124	1.28

Sample Name: LCS 440-590692/2-A

Date: 1/15/2020 7:24:54 PM

Rack:Tube: 2:42

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.2293	ppm	0.0009	0.39	9272.0000	0.2293 (ppm)
Al (396.152 nm)	0.4602	ppm	0.0009	0.20	14080.0000	0.4602 (ppm)
As (188.980 nm)	0.4622	ppm	0.0069	1.48	276.4000	0.4622 (ppm)
B (249.678 nm)	0.4548	ppm	0.0006	0.13	4804.0000	0.4548 (ppm)
Ba (233.527 nm)	0.4727	ppm	0.0008	0.17	40440.0000	0.4727 (ppm)
Be (234.861 nm)	0.4657	ppm	0.0010	0.22	73070.0000	0.4657 (ppm)
Ca (422.673 nm)	2.3660	ppm	0.0364	1.54	9305.0000	2.3660 (ppm)
Cd (214.439 nm)	0.4715	ppm	0.0005	0.11	10170.0000	0.4715 (ppm)
Co (228.615 nm)	0.4687	ppm	0.0013	0.27	6050.0000	0.4687 (ppm)
Cr (205.560 nm)	0.4675	ppm	0.0004	0.08	2075.0000	0.4675 (ppm)
Cu (324.754 nm)	0.4653	ppm	0.0005	0.10	18330.0000	0.4653 (ppm)
Fe (238.204 nm)	0.4879	ppm	0.0018	0.38	1175.0000	0.4879 (ppm)
K (766.491 nm)	4.6520	ppm	0.0968	2.08	4619.0000	4.6520 (ppm)
Li (670.783 nm)	0.4660	ppm	0.0016	0.34	26610.0000	0.4660 (ppm)
Mg (279.078 nm)	2.4010	ppm	0.0047	0.19	6494.0000	2.4010 (ppm)
Mn (259.372 nm)	0.4702	ppm	0.0011	0.23	43710.0000	0.4702 (ppm)
Mo (204.598 nm)	0.4199	ppm	0.0019	0.46	1616.0000	0.4199 (ppm)
Na (589.592 nm)	4.6020	ppm	0.0314	0.68	25190.0000	4.6020 (ppm)
Ni (231.604 nm)	0.4707	ppm	0.0016	0.33	2053.0000	0.4707 (ppm)
P (213.618 nm)	0.4650	ppm	0.0001	0.03	331.2000	0.4650 (ppm)
Pb (220.353 nm)	0.4683	ppm	0.0010	0.21	933.2000	0.4683 (ppm)
Sb (206.834 nm)	0.4981	ppm	0.0064	1.29	439.1000	0.4981 (ppm)
Se (196.026 nm)	0.4640	ppm	0.0043	0.93	286.2000	0.4640 (ppm)
Si (251.611 nm)	2.3090	ppm	0.0117	0.51	4878.0000	2.3090 (ppm)
Sn (189.925 nm)	0.3873	ppm	0.0001	0.04	223.1000	0.3873 (ppm)
Sr (421.552 nm)	0.4590	ppm	0.0002	0.04	158700.0000	0.4590 (ppm)
Ti (336.122 nm)	0.4463	ppm	0.0051	1.15	44650.0000	0.4463 (ppm)
Tl (190.794 nm)	0.4511	ppm	0.0016	0.36	491.2000	0.4511 (ppm)
V (292.401 nm)	0.4664	ppm	0.0010	0.22	14230.0000	0.4664 (ppm)
W (207.912 nm)	0.4202	ppm	0.0056	1.34	684.0000	0.4202 (ppm)
Zn (202.548 nm)	0.4869	ppm	0.0011	0.22	7552.0000	0.4869 (ppm)
Zr (343.823 nm)	0.3767	ppm	0.0150	3.99	31280.0000	0.3767 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9811	371300.0000	0.0029	0.30
Y_R 371.029	0.9713	49270.0000	0.0000	0.00

Sample Name: 720-96900-E-1-A

Date: 1/15/2020 7:28:05 PM

Rack:Tube: 2:43

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0011 u	ppm	0.0002	20.69	-55.4600	-0.0011 u (ppm)
Al (396.152 nm)	7.4720	ppm	0.0100	0.13	226200.0000	7.4720 (ppm)
As (188.980 nm)	0.0079 u	ppm	0.0125	> 100.00	1.2690	0.0079 u (ppm)
B (249.678 nm)	0.1201	ppm	0.0003	0.24	1238.0000	0.1201 (ppm)
Ba (233.527 nm)	0.0721	ppm	0.0005	0.65	6229.0000	0.0721 (ppm)
Be (234.861 nm)	0.0001	ppm	0.0002	> 100.00	468.3000	0.0001 (ppm)
Ca (422.673 nm)	162.5000	ppm	0.0859	0.05	633700.0000	162.5000 (ppm)
Cd (214.439 nm)	0.0004	ppm	0.0001	18.75	6.9130	0.0004 (ppm)
Co (228.615 nm)	0.0337	ppm	0.0001	0.19	461.6000	0.0337 (ppm)
Cr (205.560 nm)	0.0116	ppm	0.0012	10.12	55.1800	0.0116 (ppm)
Cu (324.754 nm)	0.0141	ppm	0.0001	0.37	591.4000	0.0141 (ppm)
Fe (238.204 nm)	28.3600	ppm	0.0403	0.14	71520.0000	28.3600 (ppm)
K (766.491 nm)	1.3050	ppm	0.0582	4.46	1238.0000	1.3050 (ppm)
Li (670.783 nm)	0.0109	ppm	0.0004	3.22	871.5000	0.0109 (ppm)
Mg (279.078 nm)	40.4300	ppm	0.3008	0.74	109200.0000	40.4300 (ppm)
Mn (259.372 nm)	2.8340	ppm	0.0013	0.05	265100.0000	2.8340 (ppm)
Mo (204.598 nm)	0.0047	ppm	0.0014	30.54	18.0700	0.0047 (ppm)
Na (589.592 nm)	33.1200	ppm	0.0529	0.16	175800.0000	33.1200 (ppm)
Ni (231.604 nm)	0.0202	ppm	0.0004	1.84	72.1900	0.0202 (ppm)
P (213.618 nm)	0.3687	ppm	0.0035	0.94	278.2000	0.3687 (ppm)
Pb (220.353 nm)	0.0075	ppm	0.0002	2.36	13.4900	0.0075 (ppm)
Sb (206.834 nm)	-0.0002 u	ppm	0.0051	> 100.00	2.9610	-0.0002 u (ppm)
Se (196.026 nm)	0.0021 u	ppm	0.0037	> 100.00	-3.5060	0.0021 u (ppm)
Si (251.611 nm)	32.8100	ppm	0.1803	0.55	68360.0000	32.8100 (ppm)
Sn (189.925 nm)	-0.0032 u	ppm	0.0043	> 100.00	-2.1460	-0.0032 u (ppm)
Sr (421.552 nm)	0.4226	ppm	0.0013	0.30	147800.0000	0.4226 (ppm)
Ti (336.122 nm)	1.3310	ppm	0.0025	0.19	133400.0000	1.3310 (ppm)
Tl (190.794 nm)	-0.0105 u	ppm	0.0020	19.16	-17.6200	-0.0105 u (ppm)
V (292.401 nm)	0.0677	ppm	0.0004	0.58	2369.0000	0.0677 (ppm)
W (207.912 nm)	0.0006 u	ppm	0.0048	> 100.00	-6.6570	0.0006 u (ppm)
Zn (202.548 nm)	0.0827	ppm	0.0001	0.12	1240.0000	0.0827 (ppm)
Zr (343.823 nm)	0.0125	ppm	0.0001	0.94	1272.0000	0.0125 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9359	354200.0000	0.0026	0.28
Y_R 371.029	0.9465	48010.0000	0.0040	0.42

Sample Name: 720-96900-E-1-B MS

Date: 1/15/2020 7:31:17 PM

Rack:Tube: 2:44

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.2395	ppm	0.0003	0.14	9634.0000	0.2395 (ppm)
Al (396.152 nm)	8.1210	ppm	0.0163	0.20	246400.0000	8.1210 (ppm)
As (188.980 nm)	0.4934	ppm	0.0042	0.84	293.1000	0.4934 (ppm)
B (249.678 nm)	0.6048	ppm	0.0012	0.19	6376.0000	0.6048 (ppm)
Ba (233.527 nm)	0.5439	ppm	0.0009	0.16	46530.0000	0.5439 (ppm)
Be (234.861 nm)	0.4842	ppm	0.0007	0.14	76410.0000	0.4842 (ppm)
Ca (422.673 nm)	163.4000	ppm	2.0970	1.28	637100.0000	163.4000 (ppm)
Cd (214.439 nm)	0.4661	ppm	0.0009	0.19	10060.0000	0.4661 (ppm)
Co (228.615 nm)	0.4766	ppm	0.0022	0.47	6191.0000	0.4766 (ppm)
Cr (205.560 nm)	0.4868	ppm	0.0002	0.04	2164.0000	0.4868 (ppm)
Cu (324.754 nm)	0.4961	ppm	0.0009	0.19	19450.0000	0.4961 (ppm)
Fe (238.204 nm)	28.4800	ppm	0.2092	0.73	71830.0000	28.4800 (ppm)
K (766.491 nm)	6.0240	ppm	0.0407	0.68	6050.0000	6.0240 (ppm)
Li (670.783 nm)	0.4860	ppm	0.0017	0.36	27870.0000	0.4860 (ppm)
Mg (279.078 nm)	42.4800	ppm	0.0616	0.14	114700.0000	42.4800 (ppm)
Mn (259.372 nm)	3.2610	ppm	0.0049	0.15	304700.0000	3.2610 (ppm)
Mo (204.598 nm)	0.4361	ppm	0.0018	0.42	1680.0000	0.4361 (ppm)
Na (589.592 nm)	37.3400	ppm	0.2212	0.59	198000.0000	37.3400 (ppm)
Ni (231.604 nm)	0.4630	ppm	0.0024	0.52	2015.0000	0.4630 (ppm)
P (213.618 nm)	0.8794	ppm	0.0057	0.64	638.8000	0.8794 (ppm)
Pb (220.353 nm)	0.4664	ppm	0.0006	0.14	919.4000	0.4664 (ppm)
Sb (206.834 nm)	0.5001	ppm	0.0045	0.90	441.3000	0.5001 (ppm)
Se (196.026 nm)	0.4683	ppm	0.0041	0.88	282.5000	0.4683 (ppm)
Si (251.611 nm)	36.9000	ppm	0.0062	0.02	76950.0000	36.9000 (ppm)
Sn (189.925 nm)	0.4474	ppm	0.0103	2.29	257.9000	0.4474 (ppm)
Sr (421.552 nm)	0.8931	ppm	0.0028	0.31	310500.0000	0.8931 (ppm)
Ti (336.122 nm)	1.8780	ppm	0.0133	0.71	188300.0000	1.8780 (ppm)
Tl (190.794 nm)	0.3984	ppm	0.0138	3.45	419.4000	0.3984 (ppm)
V (292.401 nm)	0.5562	ppm	0.0011	0.19	17190.0000	0.5562 (ppm)
W (207.912 nm)	0.4083	ppm	0.0069	1.70	662.4000	0.4083 (ppm)
Zn (202.548 nm)	0.5339	ppm	0.0002	0.04	8236.0000	0.5339 (ppm)
Zr (343.823 nm)	0.5090	ppm	0.0143	2.80	41440.0000	0.5090 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9367	354500.0000	0.0002	0.02
Y_R 371.029	0.9402	47690.0000	0.0025	0.26

Sample Name: 720-96900-E-1-C MSD

Date: 1/15/2020 7:34:29 PM

Rack:Tube: 2:45

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.2383	ppm	0.0012	0.50	9589.0000	0.2383 (ppm)
Al (396.152 nm)	8.3100	ppm	0.0090	0.11	252200.0000	8.3100 (ppm)
As (188.980 nm)	0.4862	ppm	0.0010	0.21	288.7000	0.4862 (ppm)
B (249.678 nm)	0.6068	ppm	0.0016	0.27	6397.0000	0.6068 (ppm)
Ba (233.527 nm)	0.5403	ppm	0.0003	0.05	46220.0000	0.5403 (ppm)
Be (234.861 nm)	0.4820	ppm	0.0010	0.22	76070.0000	0.4820 (ppm)
Ca (422.673 nm)	164.9000	ppm	0.3064	0.19	643100.0000	164.9000 (ppm)
Cd (214.439 nm)	0.4628	ppm	0.0010	0.21	9991.0000	0.4628 (ppm)
Co (228.615 nm)	0.4770	ppm	0.0006	0.12	6197.0000	0.4770 (ppm)
Cr (205.560 nm)	0.4839	ppm	0.0005	0.11	2151.0000	0.4839 (ppm)
Cu (324.754 nm)	0.4946	ppm	0.0005	0.10	19390.0000	0.4946 (ppm)
Fe (238.204 nm)	28.9700	ppm	0.0028	0.01	73060.0000	28.9700 (ppm)
K (766.491 nm)	6.0770	ppm	0.0690	1.14	6105.0000	6.0770 (ppm)
Li (670.783 nm)	0.4829	ppm	0.0001	0.02	27690.0000	0.4829 (ppm)
Mg (279.078 nm)	42.9800	ppm	0.1012	0.24	116000.0000	42.9800 (ppm)
Mn (259.372 nm)	3.3060	ppm	0.0049	0.15	308900.0000	3.3060 (ppm)
Mo (204.598 nm)	0.4453	ppm	0.0016	0.37	1716.0000	0.4453 (ppm)
Na (589.592 nm)	37.9100	ppm	0.0530	0.14	201100.0000	37.9100 (ppm)
Ni (231.604 nm)	0.4614	ppm	0.0010	0.22	2008.0000	0.4614 (ppm)
P (213.618 nm)	0.8789	ppm	0.0012	0.14	638.3000	0.8789 (ppm)
Pb (220.353 nm)	0.4629	ppm	0.0057	1.24	912.3000	0.4629 (ppm)
Sb (206.834 nm)	0.5073	ppm	0.0032	0.62	447.4000	0.5073 (ppm)
Se (196.026 nm)	0.4684	ppm	0.0030	0.64	282.6000	0.4684 (ppm)
Si (251.611 nm)	40.2100	ppm	0.0451	0.11	83840.0000	40.2100 (ppm)
Sn (189.925 nm)	0.4559	ppm	0.0054	1.17	262.7000	0.4559 (ppm)
Sr (421.552 nm)	0.8968	ppm	0.0021	0.23	311800.0000	0.8968 (ppm)
Ti (336.122 nm)	1.9120	ppm	0.0063	0.33	191700.0000	1.9120 (ppm)
Tl (190.794 nm)	0.4012	ppm	0.0183	4.55	422.2000	0.4012 (ppm)
V (292.401 nm)	0.5550	ppm	0.0009	0.15	17160.0000	0.5550 (ppm)
W (207.912 nm)	0.4179	ppm	0.0037	0.89	677.9000	0.4179 (ppm)
Zn (202.548 nm)	0.5325	ppm	0.0005	0.10	8215.0000	0.5325 (ppm)
Zr (343.823 nm)	0.5203	ppm	0.0131	2.51	42340.0000	0.5203 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9348	353800.0000	0.0030	0.32
Y_R 371.029	0.9446	47910.0000	0.0004	0.04

Sample Name: 720-96900-E-2-A

Date: 1/15/2020 7:37:42 PM

Rack:Tube: 2:46

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0006 u	ppm	0.0001	12.23	-10.4600	-0.0006 u (ppm)
Al (396.152 nm)	3.0820	ppm	0.0011	0.03	93190.0000	3.0820 (ppm)
As (188.980 nm)	0.0062	ppm	0.0008	13.25	1.2490	0.0062 (ppm)
B (249.678 nm)	0.0184	ppm	0.0002	1.24	178.4000	0.0184 (ppm)
Ba (233.527 nm)	0.0299	ppm	0.0000	0.04	2620.0000	0.0299 (ppm)
Be (234.861 nm)	0.0001	ppm	0.0001	88.33	143.2000	0.0001 (ppm)
Ca (422.673 nm)	245.8000	ppm	0.5253	0.21	958500.0000	245.8000 (ppm)
Cd (214.439 nm)	0.0002	ppm	0.0000	17.50	-0.3756	0.0002 (ppm)
Co (228.615 nm)	0.0055	ppm	0.0001	1.33	71.7800	0.0055 (ppm)
Cr (205.560 nm)	0.0060	ppm	0.0010	16.55	30.6100	0.0060 (ppm)
Cu (324.754 nm)	0.0068	ppm	0.0004	5.79	221.8000	0.0068 (ppm)
Fe (238.204 nm)	7.3620	ppm	0.0324	0.44	18530.0000	7.3620 (ppm)
K (766.491 nm)	0.5273	ppm	0.0336	6.38	440.2000	0.5273 (ppm)
Li (670.783 nm)	0.0018	ppm	0.0012	68.92	538.8000	0.0018 (ppm)
Mg (279.078 nm)	16.5300	ppm	0.0472	0.29	44630.0000	16.5300 (ppm)
Mn (259.372 nm)	0.3858	ppm	0.0005	0.12	36570.0000	0.3858 (ppm)
Mo (204.598 nm)	0.0018	ppm	0.0020	> 100.00	5.6040	0.0018 (ppm)
Na (589.592 nm)	13.4400	ppm	0.0041	0.03	71870.0000	13.4400 (ppm)
Ni (231.604 nm)	0.0050	ppm	0.0017	34.62	6.2730	0.0050 (ppm)
P (213.618 nm)	0.1038	ppm	0.0017	1.68	79.3000	0.1038 (ppm)
Pb (220.353 nm)	0.0010	ppm	0.0005	45.22	9.2540	0.0010 (ppm)
Sb (206.834 nm)	-0.0011 u	ppm	0.0009	75.57	2.2450	-0.0011 u (ppm)
Se (196.026 nm)	0.0109	ppm	0.0014	12.59	5.5120	0.0109 (ppm)
Si (251.611 nm)	20.4300	ppm	0.1076	0.53	42560.0000	20.4300 (ppm)
Sn (189.925 nm)	-0.0056 u	ppm	0.0014	25.73	-3.5590	-0.0056 u (ppm)
Sr (421.552 nm)	0.4083	ppm	0.0005	0.13	143700.0000	0.4083 (ppm)
Ti (336.122 nm)	0.2432	ppm	0.0019	0.80	24060.0000	0.2432 (ppm)
Tl (190.794 nm)	0.0099	ppm	0.0008	8.34	13.1900	0.0099 (ppm)
V (292.401 nm)	0.0058	ppm	0.0012	20.77	546.6000	0.0058 (ppm)
W (207.912 nm)	0.0051	ppm	0.0007	13.23	-1.1770	0.0051 (ppm)
Zn (202.548 nm)	0.0184	ppm	0.0002	1.15	221.2000	0.0184 (ppm)
Zr (343.823 nm)	0.0041	ppm	0.0000	0.90	1033.0000	0.0041 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9365	354500.0000	0.0008	0.08
Y_R 371.029	0.9406	47710.0000	0.0022	0.24

Sample Name: 720-96900-E-3-A

Date: 1/15/2020 7:40:54 PM

Rack:Tube: 2:47

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0009 u	ppm	0.0003	29.35	-8.5280	-0.0009 u (ppm)
Al (396.152 nm)	2.0780	ppm	0.0101	0.48	62780.0000	2.0780 (ppm)
As (188.980 nm)	0.0004 u	ppm	0.0058	> 100.00	-1.7940	0.0004 u (ppm)
B (249.678 nm)	0.0331	ppm	0.0001	0.44	341.4000	0.0331 (ppm)
Ba (233.527 nm)	0.0281	ppm	0.0002	0.65	2471.0000	0.0281 (ppm)
Be (234.861 nm)	0.0000	ppm	0.0000	37.87	61.7900	0.0000 (ppm)
Ca (422.673 nm)	147.2000	ppm	0.2287	0.16	574100.0000	147.2000 (ppm)
Cd (214.439 nm)	0.0004	ppm	0.0004	> 100.00	2.0340	0.0004 (ppm)
Co (228.615 nm)	0.0028	ppm	0.0002	7.23	34.5300	0.0028 (ppm)
Cr (205.560 nm)	0.0080	ppm	0.0012	14.77	37.9200	0.0080 (ppm)
Cu (324.754 nm)	0.0037	ppm	0.0000	0.92	174.5000	0.0037 (ppm)
Fe (238.204 nm)	2.6800	ppm	0.0001	0.01	6714.0000	2.6800 (ppm)
K (766.491 nm)	0.5015	ppm	0.0555	11.06	412.7000	0.5015 (ppm)
Li (670.783 nm)	0.0002 u	ppm	0.0005	> 100.00	461.5000	0.0002 u (ppm)
Mg (279.078 nm)	46.8900	ppm	0.0295	0.06	126600.0000	46.8900 (ppm)
Mn (259.372 nm)	0.0657	ppm	0.0000	0.03	6580.0000	0.0657 (ppm)
Mo (204.598 nm)	0.0005 u	ppm	0.0012	> 100.00	0.3903	0.0005 u (ppm)
Na (589.592 nm)	24.5800	ppm	0.0719	0.29	130500.0000	24.5800 (ppm)
Ni (231.604 nm)	0.0099	ppm	0.0003	2.78	29.0700	0.0099 (ppm)
P (213.618 nm)	0.0659	ppm	0.0035	5.35	51.9800	0.0659 (ppm)
Pb (220.353 nm)	0.0002 u	ppm	0.0021	> 100.00	9.6150	0.0002 u (ppm)
Sb (206.834 nm)	-0.0074 u	ppm	0.0028	37.48	-3.4970	-0.0074 u (ppm)
Se (196.026 nm)	0.0033	ppm	0.0017	50.62	2.2180	0.0033 (ppm)
Si (251.611 nm)	19.3000	ppm	0.0940	0.49	40210.0000	19.3000 (ppm)
Sn (189.925 nm)	-0.0068 u	ppm	0.0006	8.93	-4.1920	-0.0068 u (ppm)
Sr (421.552 nm)	0.2855	ppm	0.0016	0.56	100200.0000	0.2855 (ppm)
Ti (336.122 nm)	0.1600	ppm	0.0016	0.99	15790.0000	0.1600 (ppm)
Tl (190.794 nm)	0.0065	ppm	0.0008	11.83	10.3600	0.0065 (ppm)
V (292.401 nm)	0.0057	ppm	0.0002	2.83	428.1000	0.0057 (ppm)
W (207.912 nm)	0.0013 u	ppm	0.0019	> 100.00	-5.7690	0.0013 u (ppm)
Zn (202.548 nm)	0.0214	ppm	0.0001	0.29	311.4000	0.0214 (ppm)
Zr (343.823 nm)	0.0036	ppm	0.0001	3.95	1073.0000	0.0036 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9360	354300.0000	0.0036	0.39
Y_R 371.029	0.9382	47590.0000	0.0005	0.05

Sample Name: 720-96901-K-1-A

Date: 1/15/2020 7:44:05 PM

Rack:Tube: 2:48

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0011 u	ppm	0.0000	1.48	-14.5900	-0.0011 u (ppm)
Al (396.152 nm)	0.2817	ppm	0.0009	0.31	8306.0000	0.2817 (ppm)
As (188.980 nm)	-0.0007 u	ppm	0.0028	> 100.00	-2.4180	-0.0007 u (ppm)
B (249.678 nm)	0.0756	ppm	0.0000	0.00	796.9000	0.0756 (ppm)
Ba (233.527 nm)	0.0270	ppm	0.0002	0.78	2371.0000	0.0270 (ppm)
Be (234.861 nm)	-0.0001 u	ppm	0.0000	13.14	8.1100	-0.0001 u (ppm)
Ca (422.673 nm)	188.8000	ppm	0.8909	0.47	736300.0000	188.8000 (ppm)
Cd (214.439 nm)	0.0001	ppm	0.0000	71.43	-5.0430	0.0001 (ppm)
Co (228.615 nm)	0.0015	ppm	0.0003	20.65	12.9800	0.0015 (ppm)
Cr (205.560 nm)	0.0021	ppm	0.0007	31.30	12.4900	0.0021 (ppm)
Cu (324.754 nm)	0.0178	ppm	0.0003	1.84	689.7000	0.0178 (ppm)
Fe (238.204 nm)	0.3919	ppm	0.0055	1.39	935.4000	0.3919 (ppm)
K (766.491 nm)	18.6800	ppm	0.0109	0.06	18920.0000	18.6800 (ppm)
Li (670.783 nm)	0.0094	ppm	0.0005	4.81	922.3000	0.0094 (ppm)
Mg (279.078 nm)	12.9300	ppm	0.0254	0.20	34920.0000	12.9300 (ppm)
Mn (259.372 nm)	0.0343	ppm	0.0001	0.37	3321.0000	0.0343 (ppm)
Mo (204.598 nm)	0.0018	ppm	0.0007	41.12	5.3210	0.0018 (ppm)
Na (589.592 nm)	164.9000	ppm	0.5270	0.32	870600.0000	164.9000 (ppm)
Ni (231.604 nm)	0.0040	ppm	0.0002	4.50	2.8630	0.0040 (ppm)
P (213.618 nm)	6.0740	ppm	0.0261	0.43	4532.0000	6.0740 (ppm)
Pb (220.353 nm)	0.0013	ppm	0.0008	66.02	12.4500	0.0013 (ppm)
Sb (206.834 nm)	0.0071	ppm	0.0070	98.76	9.2980	0.0071 (ppm)
Se (196.026 nm)	-0.0010 u	ppm	0.0059	> 100.00	-0.0056	-0.0010 u (ppm)
Si (251.611 nm)	9.3360	ppm	0.0260	0.28	19450.0000	9.3360 (ppm)
Sn (189.925 nm)	-0.0021 u	ppm	0.0027	> 100.00	-1.5420	-0.0021 u (ppm)
Sr (421.552 nm)	0.3540	ppm	0.0007	0.20	124400.0000	0.3540 (ppm)
Ti (336.122 nm)	0.0021	ppm	0.0004	17.83	-102.3000	0.0021 (ppm)
Tl (190.794 nm)	0.0070	ppm	0.0005	7.02	12.3200	0.0070 (ppm)
V (292.401 nm)	-0.0057 u	ppm	0.0001	2.03	121.3000	-0.0057 u (ppm)
W (207.912 nm)	-0.0001 u	ppm	0.0042	> 100.00	-5.4860	-0.0001 u (ppm)
Zn (202.548 nm)	0.2544	ppm	0.0007	0.29	3873.0000	0.2544 (ppm)
Zr (343.823 nm)	0.0045	ppm	0.0006	13.73	1198.0000	0.0045 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9251	350100.0000	0.0016	0.17
Y_R 371.029	0.9384	47600.0000	0.0015	0.16

Sample Name: 720-96901-K-2-A

Date: 1/15/2020 7:47:16 PM

Rack:Tube: 2:49

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0013 u	ppm	0.0002	19.57	-19.1700	-0.0013 u (ppm)
Al (396.152 nm)	0.4403	ppm	0.0006	0.13	13110.0000	0.4403 (ppm)
As (188.980 nm)	0.0016 u	ppm	0.0079	> 100.00	-0.9876	0.0016 u (ppm)
B (249.678 nm)	0.0620	ppm	0.0001	0.15	651.2000	0.0620 (ppm)
Ba (233.527 nm)	0.0316	ppm	0.0003	0.89	2764.0000	0.0316 (ppm)
Be (234.861 nm)	0.0000 u	ppm	0.0000	> 100.00	30.0000	0.0000 u (ppm)
Ca (422.673 nm)	182.1000	ppm	0.8967	0.49	710200.0000	182.1000 (ppm)
Cd (214.439 nm)	0.0002	ppm	0.0001	54.22	-2.3030	0.0002 (ppm)
Co (228.615 nm)	0.0013	ppm	0.0004	29.79	11.3300	0.0013 (ppm)
Cr (205.560 nm)	0.0015	ppm	0.0004	26.22	9.6870	0.0015 (ppm)
Cu (324.754 nm)	0.0171	ppm	0.0004	2.30	668.5000	0.0171 (ppm)
Fe (238.204 nm)	0.9526	ppm	0.0006	0.07	2351.0000	0.9526 (ppm)
K (766.491 nm)	47.2100	ppm	0.2256	0.48	48000.0000	47.2100 (ppm)
Li (670.783 nm)	0.0075	ppm	0.0021	27.57	805.3000	0.0075 (ppm)
Mg (279.078 nm)	14.9400	ppm	0.0842	0.56	40360.0000	14.9400 (ppm)
Mn (259.372 nm)	0.0418	ppm	0.0001	0.13	4080.0000	0.0418 (ppm)
Mo (204.598 nm)	0.0012	ppm	0.0007	62.34	2.8780	0.0012 (ppm)
Na (589.592 nm)	344.4000	ppm	0.9047	0.26	1817000.0000	344.4000 (ppm)
Ni (231.604 nm)	0.0055	ppm	0.0017	30.55	9.6060	0.0055 (ppm)
P (213.618 nm)	14.5500	ppm	0.1289	0.89	10850.0000	14.5500 (ppm)
Pb (220.353 nm)	0.0030	ppm	0.0006	18.74	15.5400	0.0030 (ppm)
Sb (206.834 nm)	-0.0005 u	ppm	0.0033	> 100.00	2.6640	-0.0005 u (ppm)
Se (196.026 nm)	0.0021	ppm	0.0024	> 100.00	1.7540	0.0021 (ppm)
Si (251.611 nm)	9.8520	ppm	0.0048	0.05	20530.0000	9.8520 (ppm)
Sn (189.925 nm)	-0.0012 u	ppm	0.0036	> 100.00	-0.9880	-0.0012 u (ppm)
Sr (421.552 nm)	0.3444	ppm	0.0013	0.37	121000.0000	0.3444 (ppm)
Ti (336.122 nm)	0.0048	ppm	0.0000	0.43	179.2000	0.0048 (ppm)
Tl (190.794 nm)	0.0056	ppm	0.0011	20.10	10.8200	0.0056 (ppm)
V (292.401 nm)	-0.0043 u	ppm	0.0001	1.81	158.2000	-0.0043 u (ppm)
W (207.912 nm)	-0.0006 u	ppm	0.0025	> 100.00	-5.5480	-0.0006 u (ppm)
Zn (202.548 nm)	0.2991	ppm	0.0004	0.13	4564.0000	0.2991 (ppm)
Zr (343.823 nm)	0.0145	ppm	0.0026	17.95	1999.0000	0.0145 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9064	343100.0000	0.0005	0.05
Y_R 371.029	0.9279	47060.0000	0.0032	0.35

Sample Name: CCV 6043773

Date: 1/15/2020 7:50:28 PM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.4882	ppm	0.0017	0.34	19710.0000	0.4882 (ppm)
Al (396.152 nm)	0.9700	ppm	0.0026	0.27	30160.0000	0.9700 (ppm)
As (188.980 nm)	0.9737	ppm	0.0021	0.22	583.8000	0.9737 (ppm)
B (249.678 nm)	0.9713	ppm	0.0027	0.28	10270.0000	0.9713 (ppm)
Ba (233.527 nm)	0.9971	ppm	0.0001	0.01	85240.0000	0.9971 (ppm)
Be (234.861 nm)	0.9797	ppm	0.0014	0.14	153700.0000	0.9797 (ppm)
Ca (422.673 nm)	4.9040	ppm	0.0046	0.09	19200.0000	4.9040 (ppm)
Cd (214.439 nm)	0.9788	ppm	0.0006	0.06	21130.0000	0.9788 (ppm)
Co (228.615 nm)	0.9748	ppm	0.0015	0.16	12600.0000	0.9748 (ppm)
Cr (205.560 nm)	0.9750	ppm	0.0015	0.15	4328.0000	0.9750 (ppm)
Cu (324.754 nm)	0.9843	ppm	0.0014	0.14	38640.0000	0.9843 (ppm)
Fe (238.204 nm)	0.9958	ppm	0.0136	1.37	2456.0000	0.9958 (ppm)
K (766.491 nm)	9.7360	ppm	0.1154	1.19	9805.0000	9.7360 (ppm)
Li (670.783 nm)	0.9848	ppm	0.0003	0.03	56080.0000	0.9848 (ppm)
Mg (279.078 nm)	5.0160	ppm	0.0024	0.05	13550.0000	5.0160 (ppm)
Mn (259.372 nm)	0.9759	ppm	0.0017	0.18	90740.0000	0.9759 (ppm)
Mo (204.598 nm)	0.9726	ppm	0.0013	0.13	3746.0000	0.9726 (ppm)
Na (589.592 nm)	9.9750	ppm	0.0081	0.08	53560.0000	9.9750 (ppm)
Ni (231.604 nm)	0.9748	ppm	0.0009	0.09	4264.0000	0.9748 (ppm)
P (213.618 nm)	0.9990	ppm	0.0048	0.48	706.3000	0.9990 (ppm)
Pb (220.353 nm)	0.9810	ppm	0.0002	0.02	1945.0000	0.9810 (ppm)
Sb (206.834 nm)	0.9772	ppm	0.0146	1.49	857.1000	0.9772 (ppm)
Se (196.026 nm)	0.9713	ppm	0.0010	0.10	598.0000	0.9713 (ppm)
Si (251.611 nm)	4.9160	ppm	0.0476	0.97	10400.0000	4.9160 (ppm)
Sn (189.925 nm)	0.9808	ppm	0.0056	0.57	565.5000	0.9808 (ppm)
Sr (421.552 nm)	0.9774	ppm	0.0007	0.07	338000.0000	0.9774 (ppm)
Ti (336.122 nm)	0.9882	ppm	0.0063	0.64	99050.0000	0.9882 (ppm)
Tl (190.794 nm)	0.9760	ppm	0.0076	0.78	1057.0000	0.9760 (ppm)
V (292.401 nm)	0.9796	ppm	0.0030	0.30	29770.0000	0.9796 (ppm)
W (207.912 nm)	0.9852	ppm	0.0068	0.69	1610.0000	0.9852 (ppm)
Zn (202.548 nm)	0.9820	ppm	0.0027	0.28	15230.0000	0.9820 (ppm)
Zr (343.823 nm)	0.9887	ppm	0.0053	0.54	80780.0000	0.9887 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9604	363500.0000	0.0023	0.24
Y_R 371.029	0.9503	48200.0000	0.0008	0.09

Sample Name: CCB 6043772

Date: 1/15/2020 7:53:40 PM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.0000 u	ppm	0.0003	> 100.00	47.4700	0.0000 u (ppm)
Al (396.152 nm)	0.0010	ppm	0.0005	53.68	-291.7000	0.0010 (ppm)
As (188.980 nm)	0.0027	ppm	0.0031	> 100.00	0.3224	0.0027 (ppm)
B (249.678 nm)	0.0007	ppm	0.0005	78.43	-5.9960	0.0007 (ppm)
Ba (233.527 nm)	0.0003	ppm	0.0001	43.75	84.7600	0.0003 (ppm)
Be (234.861 nm)	0.0003	ppm	0.0001	45.76	55.5400	0.0003 (ppm)
Ca (422.673 nm)	0.0014	ppm	0.0000	2.04	85.8700	0.0014 (ppm)
Cd (214.439 nm)	0.0002	ppm	0.0001	58.69	-1.0600	0.0002 (ppm)
Co (228.615 nm)	0.0002 u	ppm	0.0005	> 100.00	-6.1160	0.0002 u (ppm)
Cr (205.560 nm)	-0.0001 u	ppm	0.0008	> 100.00	0.1547	-0.0001 u (ppm)
Cu (324.754 nm)	0.0007	ppm	0.0004	49.25	163.2000	0.0007 (ppm)
Fe (238.204 nm)	0.0035	ppm	0.0030	84.72	-46.7000	0.0035 (ppm)
K (766.491 nm)	0.0869	ppm	0.0626	71.98	-37.1400	0.0869 (ppm)
Li (670.783 nm)	0.0025	ppm	0.0012	48.04	267.3000	0.0025 (ppm)
Mg (279.078 nm)	0.0045	ppm	0.0001	1.75	26.3700	0.0045 (ppm)
Mn (259.372 nm)	0.0003	ppm	0.0001	36.61	74.7700	0.0003 (ppm)
Mo (204.598 nm)	0.0060	ppm	0.0005	8.51	21.2200	0.0060 (ppm)
Na (589.592 nm)	0.0006 u	ppm	0.0072	> 100.00	904.3000	0.0006 u (ppm)
Ni (231.604 nm)	0.0007	ppm	0.0003	40.65	-8.6970	0.0007 (ppm)
P (213.618 nm)	0.0076	ppm	0.0037	48.14	9.6860	0.0076 (ppm)
Pb (220.353 nm)	-0.0013 u	ppm	0.0001	6.86	6.1950	-0.0013 u (ppm)
Sb (206.834 nm)	0.0002 u	ppm	0.0061	> 100.00	2.6580	0.0002 u (ppm)
Se (196.026 nm)	0.0104 Z	ppm	0.0029	27.87	7.8430 Z	0.0104 Z (ppm)
Si (251.611 nm)	0.0026	ppm	0.0018	70.07	5.3380	0.0026 (ppm)
Sn (189.925 nm)	0.0014 u	ppm	0.0052	> 100.00	0.4591	0.0014 u (ppm)
Sr (421.552 nm)	0.0001	ppm	0.0001	84.91	-8.2840	0.0001 (ppm)
Ti (336.122 nm)	0.0023	ppm	0.0003	14.68	68.4200	0.0023 (ppm)
Tl (190.794 nm)	0.0045	ppm	0.0010	22.06	10.4800	0.0045 (ppm)
V (292.401 nm)	0.0007	ppm	0.0002	24.95	94.4400	0.0007 (ppm)
W (207.912 nm)	0.0061	ppm	0.0001	1.55	4.1250	0.0061 (ppm)
Zn (202.548 nm)	0.0006	ppm	0.0001	13.34	17.9300	0.0006 (ppm)
Zr (343.823 nm)	0.0006	ppm	0.0000	2.91	859.2000	0.0006 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9685	366600.0000	0.0020	0.21
Y_R 371.029	0.9538	48380.0000	0.0031	0.32

Sample Name: 320-57757-F-2-A

Date: 1/15/2020 7:56:52 PM

Rack:Tube: 2:50

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0003 u	ppm	0.0001	36.89	33.4700	-0.0003 u (ppm)
Al (396.152 nm)	0.1169	ppm	0.0004	0.33	3222.0000	0.1169 (ppm)
As (188.980 nm)	0.0052	ppm	0.0002	3.73	1.8330	0.0052 (ppm)
B (249.678 nm)	0.0098	ppm	0.0005	5.40	91.5000	0.0098 (ppm)
Ba (233.527 nm)	0.0059	ppm	0.0000	0.12	566.3000	0.0059 (ppm)
Be (234.861 nm)	0.0000 u	ppm	0.0001	> 100.00	14.7200	0.0000 u (ppm)
Ca (422.673 nm)	6.0090	ppm	0.0144	0.24	23510.0000	6.0090 (ppm)
Cd (214.439 nm)	0.0000 u	ppm	0.0000	14.15	-7.1390	0.0000 u (ppm)
Co (228.615 nm)	0.0000 u	ppm	0.0004	> 100.00	-8.5500	0.0000 u (ppm)
Cr (205.560 nm)	0.0003 u	ppm	0.0005	> 100.00	2.1720	0.0003 u (ppm)
Cu (324.754 nm)	0.0011	ppm	0.0002	15.29	172.0000	0.0011 (ppm)
Fe (238.204 nm)	0.1135	ppm	0.0026	2.26	231.1000	0.1135 (ppm)
K (766.491 nm)	1.1130	ppm	0.0069	0.62	1009.0000	1.1130 (ppm)
Li (670.783 nm)	0.0028	ppm	0.0012	41.22	292.9000	0.0028 (ppm)
Mg (279.078 nm)	0.4661	ppm	0.0022	0.48	1273.0000	0.4661 (ppm)
Mn (259.372 nm)	0.0076	ppm	0.0000	0.31	756.8000	0.0076 (ppm)
Mo (204.598 nm)	0.0009	ppm	0.0004	40.91	1.6100	0.0009 (ppm)
Na (589.592 nm)	4.4780	ppm	0.0045	0.10	24510.0000	4.4780 (ppm)
Ni (231.604 nm)	0.0009	ppm	0.0001	7.21	-7.9540	0.0009 (ppm)
P (213.618 nm)	0.0177	ppm	0.0067	37.54	17.2100	0.0177 (ppm)
Pb (220.353 nm)	0.0046	ppm	0.0019	41.45	17.7600	0.0046 (ppm)
Sb (206.834 nm)	-0.0012 u	ppm	0.0022	> 100.00	1.4870	-0.0012 u (ppm)
Se (196.026 nm)	0.0016 u	ppm	0.0050	> 100.00	2.4550	0.0016 u (ppm)
Si (251.611 nm)	1.4050	ppm	0.0122	0.87	2926.0000	1.4050 (ppm)
Sn (189.925 nm)	-0.0018 u	ppm	0.0034	> 100.00	-1.3990	-0.0018 u (ppm)
Sr (421.552 nm)	0.0270	ppm	0.0000	0.05	9361.0000	0.0270 (ppm)
Ti (336.122 nm)	0.0020	ppm	0.0002	10.05	41.9100	0.0020 (ppm)
Tl (190.794 nm)	0.0020	ppm	0.0021	> 100.00	7.7340	0.0020 (ppm)
V (292.401 nm)	0.0006	ppm	0.0004	74.77	100.1000	0.0006 (ppm)
W (207.912 nm)	0.0003 u	ppm	0.0010	> 100.00	-4.8600	0.0003 u (ppm)
Zn (202.548 nm)	0.0487	ppm	0.0002	0.47	756.1000	0.0487 (ppm)
Zr (343.823 nm)	0.0007	ppm	0.0001	16.75	869.4000	0.0007 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9779	370100.0000	0.0020	0.20
Y_R 371.029	0.9643	48910.0000	0.0084	0.87

Sample Name: 320-57757-G-3-A

Date: 1/15/2020 8:00:04 PM

Rack:Tube: 2:51

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.0001	ppm	0.0000	74.06	45.7900	0.0001 (ppm)
Al (396.152 nm)	0.0573	ppm	0.0000	0.02	1416.0000	0.0573 (ppm)
As (188.980 nm)	0.0048	ppm	0.0016	32.25	1.5170	0.0048 (ppm)
B (249.678 nm)	0.0093	ppm	0.0005	4.89	85.4000	0.0093 (ppm)
Ba (233.527 nm)	0.0216	ppm	0.0001	0.47	1904.0000	0.0216 (ppm)
Be (234.861 nm)	0.0000 u	ppm	0.0000	> 100.00	33.7700	0.0000 u (ppm)
Ca (422.673 nm)	11.5600	ppm	0.0148	0.13	45150.0000	11.5600 (ppm)
Cd (214.439 nm)	-0.0001 u	ppm	0.0000	39.62	-8.0190	-0.0001 u (ppm)
Co (228.615 nm)	0.0003	ppm	0.0004	> 100.00	-4.3960	0.0003 (ppm)
Cr (205.560 nm)	-0.0002 u	ppm	0.0000	1.43	-0.0336	-0.0002 u (ppm)
Cu (324.754 nm)	0.0009	ppm	0.0004	45.31	161.1000	0.0009 (ppm)
Fe (238.204 nm)	1.1220	ppm	0.0054	0.48	2777.0000	1.1220 (ppm)
K (766.491 nm)	1.4010	ppm	0.0194	1.39	1303.0000	1.4010 (ppm)
Li (670.783 nm)	0.0025	ppm	0.0012	50.62	273.7000	0.0025 (ppm)
Mg (279.078 nm)	0.9109	ppm	0.0001	0.01	2473.0000	0.9109 (ppm)
Mn (259.372 nm)	0.0591	ppm	0.0001	0.09	5627.0000	0.0591 (ppm)
Mo (204.598 nm)	0.0010	ppm	0.0003	28.60	1.9850	0.0010 (ppm)
Na (589.592 nm)	9.9670	ppm	0.0097	0.10	53460.0000	9.9670 (ppm)
Ni (231.604 nm)	-0.0001 u	ppm	0.0001	60.14	-12.5500	-0.0001 u (ppm)
P (213.618 nm)	0.0023	ppm	0.0008	35.58	5.6500	0.0023 (ppm)
Pb (220.353 nm)	0.0020	ppm	0.0004	18.99	12.2400	0.0020 (ppm)
Sb (206.834 nm)	-0.0017 u	ppm	0.0005	30.15	1.0810	-0.0017 u (ppm)
Se (196.026 nm)	0.0037	ppm	0.0020	55.34	3.4640	0.0037 (ppm)
Si (251.611 nm)	2.3180	ppm	0.0180	0.78	4829.0000	2.3180 (ppm)
Sn (189.925 nm)	-0.0022 u	ppm	0.0024	> 100.00	-1.5840	-0.0022 u (ppm)
Sr (421.552 nm)	0.0411	ppm	0.0001	0.19	14300.0000	0.0411 (ppm)
Ti (336.122 nm)	0.0017	ppm	0.0001	7.29	7.9800	0.0017 (ppm)
Tl (190.794 nm)	0.0010 u	ppm	0.0038	> 100.00	6.7100	0.0010 u (ppm)
V (292.401 nm)	0.0003	ppm	0.0000	14.88	97.4900	0.0003 (ppm)
W (207.912 nm)	0.0010	ppm	0.0008	85.96	-3.4060	0.0010 (ppm)
Zn (202.548 nm)	0.0759	ppm	0.0005	0.60	1173.0000	0.0759 (ppm)
Zr (343.823 nm)	0.0009	ppm	0.0001	13.38	864.5000	0.0009 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9743	368800.0000	0.0013	0.13
Y_R 371.029	0.9643	48910.0000	0.0031	0.32

Sample Name: 320-57757-G-4-A

Date: 1/15/2020 8:03:16 PM

Rack:Tube: 2:52

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0002 u	ppm	0.0003	> 100.00	36.2000	-0.0002 u (ppm)
Al (396.152 nm)	0.2403	ppm	0.0011	0.45	6960.0000	0.2403 (ppm)
As (188.980 nm)	-0.0013 u	ppm	0.0067	> 100.00	-2.1850	-0.0013 u (ppm)
B (249.678 nm)	0.0128	ppm	0.0004	3.24	124.5000	0.0128 (ppm)
Ba (233.527 nm)	0.0053	ppm	0.0005	9.34	514.5000	0.0053 (ppm)
Be (234.861 nm)	0.0000 u	ppm	0.0000	> 100.00	16.1400	0.0000 u (ppm)
Ca (422.673 nm)	6.2110	ppm	0.0020	0.03	24300.0000	6.2110 (ppm)
Cd (214.439 nm)	0.0002	ppm	0.0001	64.19	-2.3690	0.0002 (ppm)
Co (228.615 nm)	0.0000 u	ppm	0.0012	> 100.00	-8.5740	0.0000 u (ppm)
Cr (205.560 nm)	0.0009	ppm	0.0005	55.45	4.8010	0.0009 (ppm)
Cu (324.754 nm)	0.0009	ppm	0.0004	43.75	167.2000	0.0009 (ppm)
Fe (238.204 nm)	0.1215	ppm	0.0019	1.56	251.2000	0.1215 (ppm)
K (766.491 nm)	0.7527	ppm	0.2141	28.45	642.1000	0.7527 (ppm)
Li (670.783 nm)	0.0023	ppm	0.0018	77.24	268.3000	0.0023 (ppm)
Mg (279.078 nm)	1.0190	ppm	0.0019	0.19	2766.0000	1.0190 (ppm)
Mn (259.372 nm)	0.0082	ppm	0.0000	0.06	819.7000	0.0082 (ppm)
Mo (204.598 nm)	-0.0005 u	ppm	0.0004	70.07	-3.7320	-0.0005 u (ppm)
Na (589.592 nm)	5.1010	ppm	0.0188	0.37	27800.0000	5.1010 (ppm)
Ni (231.604 nm)	0.0008	ppm	0.0009	> 100.00	-8.6710	0.0008 (ppm)
P (213.618 nm)	0.0208	ppm	0.0021	9.90	19.5100	0.0208 (ppm)
Pb (220.353 nm)	-0.0003 u	ppm	0.0038	> 100.00	8.1240	-0.0003 u (ppm)
Sb (206.834 nm)	-0.0033 u	ppm	0.0022	67.54	-0.3195	-0.0033 u (ppm)
Se (196.026 nm)	0.0045	ppm	0.0010	22.76	4.1830	0.0045 (ppm)
Si (251.611 nm)	3.1140	ppm	0.0105	0.34	6485.0000	3.1140 (ppm)
Sn (189.925 nm)	-0.0039 u	ppm	0.0006	14.38	-2.5890	-0.0039 u (ppm)
Sr (421.552 nm)	0.0496	ppm	0.0001	0.14	17170.0000	0.0496 (ppm)
Ti (336.122 nm)	0.0068	ppm	0.0001	1.98	518.6000	0.0068 (ppm)
Tl (190.794 nm)	0.0027	ppm	0.0008	30.31	8.4150	0.0027 (ppm)
V (292.401 nm)	0.0018	ppm	0.0002	12.00	138.6000	0.0018 (ppm)
W (207.912 nm)	-0.0008 u	ppm	0.0007	84.79	-7.1040	-0.0008 u (ppm)
Zn (202.548 nm)	0.0152	ppm	0.0000	0.28	240.7000	0.0152 (ppm)
Zr (343.823 nm)	0.0009	ppm	0.0000	3.84	884.4000	0.0009 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9767	369700.0000	0.0010	0.10
Y_R 371.029	0.9624	48820.0000	0.0030	0.31

Sample Name: 320-57757-D-5-A

Date: 1/15/2020 8:06:26 PM

Rack:Tube: 2:53

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0003 u	ppm	0.0002	58.13	33.8100	-0.0003 u (ppm)
Al (396.152 nm)	0.0542	ppm	0.0004	0.78	1320.0000	0.0542 (ppm)
As (188.980 nm)	0.0066	ppm	0.0010	14.33	2.6890	0.0066 (ppm)
B (249.678 nm)	0.0117	ppm	0.0002	2.13	111.7000	0.0117 (ppm)
Ba (233.527 nm)	0.0077	ppm	0.0003	3.55	719.3000	0.0077 (ppm)
Be (234.861 nm)	0.0000	ppm	0.0000	16.03	21.3600	0.0000 (ppm)
Ca (422.673 nm)	3.3240	ppm	0.0001	0.00	13040.0000	3.3240 (ppm)
Cd (214.439 nm)	0.0000 u	ppm	0.0001	> 100.00	-5.8120	0.0000 u (ppm)
Co (228.615 nm)	0.0001	ppm	0.0001	> 100.00	-7.5090	0.0001 (ppm)
Cr (205.560 nm)	0.0000 u	ppm	0.0002	> 100.00	0.7768	0.0000 u (ppm)
Cu (324.754 nm)	0.0018	ppm	0.0000	0.78	204.6000	0.0018 (ppm)
Fe (238.204 nm)	0.2210	ppm	0.0031	1.39	502.2000	0.2210 (ppm)
K (766.491 nm)	0.8423	ppm	0.0466	5.53	733.2000	0.8423 (ppm)
Li (670.783 nm)	0.0038	ppm	0.0003	8.43	349.7000	0.0038 (ppm)
Mg (279.078 nm)	1.1420	ppm	0.0019	0.17	3097.0000	1.1420 (ppm)
Mn (259.372 nm)	0.0151	ppm	0.0001	0.67	1464.0000	0.0151 (ppm)
Mo (204.598 nm)	0.0005 u	ppm	0.0019	> 100.00	0.0524	0.0005 u (ppm)
Na (589.592 nm)	10.2400	ppm	0.0483	0.47	54880.0000	10.2400 (ppm)
Ni (231.604 nm)	-0.0001 u	ppm	0.0008	> 100.00	-12.3800	-0.0001 u (ppm)
P (213.618 nm)	0.0039 u	ppm	0.0068	> 100.00	6.9100	0.0039 u (ppm)
Pb (220.353 nm)	0.0011	ppm	0.0011	> 100.00	10.7900	0.0011 (ppm)
Sb (206.834 nm)	0.0014	ppm	0.0000	0.69	3.8290	0.0014 (ppm)
Se (196.026 nm)	0.0032	ppm	0.0021	64.87	3.4060	0.0032 (ppm)
Si (251.611 nm)	1.2210	ppm	0.0058	0.47	2543.0000	1.2210 (ppm)
Sn (189.925 nm)	0.0047	ppm	0.0002	3.38	2.3360	0.0047 (ppm)
Sr (421.552 nm)	0.0197	ppm	0.0001	0.35	6816.0000	0.0197 (ppm)
Ti (336.122 nm)	0.0014	ppm	0.0001	10.01	-15.9000	0.0014 (ppm)
Tl (190.794 nm)	0.0033	ppm	0.0046	> 100.00	9.1170	0.0033 (ppm)
V (292.401 nm)	0.0010	ppm	0.0003	32.88	110.5000	0.0010 (ppm)
W (207.912 nm)	0.0024	ppm	0.0012	49.88	-1.7300	0.0024 (ppm)
Zn (202.548 nm)	0.0156	ppm	0.0000	0.06	248.7000	0.0156 (ppm)
Zr (343.823 nm)	0.0006	ppm	0.0002	24.73	862.1000	0.0006 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9754	369200.0000	0.0035	0.36
Y_R 371.029	0.9623	48810.0000	0.0041	0.43

Sample Name: 440-259119-E-1-A

Date: 1/15/2020 8:09:38 PM

Rack:Tube: 2:54

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0008 u	ppm	0.0002	25.43	-65.0900	-0.0008 u (ppm)
Al (396.152 nm)	35.9600	ppm	0.0445	0.12	1090000.0000	35.9600 (ppm)
As (188.980 nm)	0.0224	ppm	0.0001	0.44	9.5900	0.0224 (ppm)
B (249.678 nm)	0.0418	ppm	0.0000	0.04	378.8000	0.0418 (ppm)
Ba (233.527 nm)	0.2873	ppm	0.0002	0.08	24610.0000	0.2873 (ppm)
Be (234.861 nm)	0.0014	ppm	0.0001	6.15	971.2000	0.0014 (ppm)
Ca (422.673 nm)	6.9000	ppm	0.0047	0.07	26970.0000	6.9000 (ppm)
Cd (214.439 nm)	0.0002	ppm	0.0000	17.00	5.5560	0.0002 (ppm)
Co (228.615 nm)	0.0080	ppm	0.0010	12.73	105.4000	0.0080 (ppm)
Cr (205.560 nm)	0.0349	ppm	0.0001	0.18	156.6000	0.0349 (ppm)
Cu (324.754 nm)	0.0333	ppm	0.0005	1.38	1454.0000	0.0333 (ppm)
Fe (238.204 nm)	47.4900	ppm	0.0123	0.03	119800.0000	47.4900 (ppm)
K (766.491 nm)	3.8260	ppm	0.0781	2.04	3789.0000	3.8260 (ppm)
Li (670.783 nm)	0.0163	ppm	0.0022	13.59	920.7000	0.0163 (ppm)
Mg (279.078 nm)	9.4170	ppm	0.0145	0.15	25410.0000	9.4170 (ppm)
Mn (259.372 nm)	0.2171	ppm	0.0009	0.41	25400.0000	0.2171 (ppm)
Mo (204.598 nm)	-0.0010 u	ppm	0.0002	18.08	-1.5410	-0.0010 u (ppm)
Na (589.592 nm)	24.6700	ppm	0.0706	0.29	131300.0000	24.6700 (ppm)
Ni (231.604 nm)	0.0122	ppm	0.0018	14.94	39.2600	0.0122 (ppm)
P (213.618 nm)	0.3158	ppm	0.0010	0.32	240.7000	0.3158 (ppm)
Pb (220.353 nm)	0.0237	ppm	0.0028	11.92	33.7700	0.0237 (ppm)
Sb (206.834 nm)	-0.0048 u	ppm	0.0029	59.57	-1.0600	-0.0048 u (ppm)
Se (196.026 nm)	0.0069	ppm	0.0063	90.17	-5.1210	0.0069 (ppm)
Si (251.611 nm)	67.0800	ppm	0.0471	0.07	139700.0000	67.0800 (ppm)
Sn (189.925 nm)	-0.0048 u	ppm	0.0019	39.21	-3.0820	-0.0048 u (ppm)
Sr (421.552 nm)	0.0617	ppm	0.0001	0.13	21390.0000	0.0617 (ppm)
Ti (336.122 nm)	0.2463	ppm	0.0017	0.68	24560.0000	0.2463 (ppm)
Tl (190.794 nm)	-0.0010 u	ppm	0.0000	2.04	3.8000	-0.0010 u (ppm)
V (292.401 nm)	0.0927	ppm	0.0005	0.56	2920.0000	0.0927 (ppm)
W (207.912 nm)	-0.0019 u	ppm	0.0004	21.98	-8.8020	-0.0019 u (ppm)
Zn (202.548 nm)	0.0766	ppm	0.0000	0.04	1172.0000	0.0766 (ppm)
Zr (343.823 nm)	0.0143	ppm	0.0004	2.92	1006.0000	0.0143 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9781	370200.0000	0.0032	0.33
Y_R 371.029	0.9765	49530.0000	0.0015	0.15

Sample Name: 440-259133-J-3-C

Date: 1/15/2020 8:12:50 PM

Rack:Tube: 2:55

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0010 u	ppm	0.0003	26.83	5.5760	-0.0010 u (ppm)
Al (396.152 nm)	0.0206	ppm	0.0047	22.71	337.9000	0.0206 (ppm)
As (188.980 nm)	0.0061	ppm	0.0001	2.30	2.2630	0.0061 (ppm)
B (249.678 nm)	0.0613	ppm	0.0003	0.53	642.9000	0.0613 (ppm)
Ba (233.527 nm)	0.0517	ppm	0.0003	0.54	4483.0000	0.0517 (ppm)
Be (234.861 nm)	0.0000 u	ppm	0.0000	> 100.00	15.1000	0.0000 u (ppm)
Ca (422.673 nm)	25.8300	ppm	0.0714	0.28	100800.0000	25.8300 (ppm)
Cd (214.439 nm)	0.0000 u	ppm	0.0001	> 100.00	-5.8830	0.0000 u (ppm)
Co (228.615 nm)	0.0000 u	ppm	0.0005	> 100.00	-7.3190	0.0000 u (ppm)
Cr (205.560 nm)	0.0003 u	ppm	0.0007	> 100.00	2.1320	0.0003 u (ppm)
Cu (324.754 nm)	0.0011	ppm	0.0000	1.78	158.7000	0.0011 (ppm)
Fe (238.204 nm)	0.0258	ppm	0.0027	10.50	11.0000	0.0258 (ppm)
K (766.491 nm)	1.4090	ppm	0.0066	0.47	1318.0000	1.4090 (ppm)
Li (670.783 nm)	0.0142	ppm	0.0015	10.57	1036.0000	0.0142 (ppm)
Mg (279.078 nm)	20.8700	ppm	0.0459	0.22	56350.0000	20.8700 (ppm)
Mn (259.372 nm)	0.0027	ppm	0.0000	1.09	372.0000	0.0027 (ppm)
Mo (204.598 nm)	-0.0001 u	ppm	0.0011	> 100.00	-1.9750	-0.0001 u (ppm)
Na (589.592 nm)	93.2100	ppm	0.4244	0.46	492300.0000	93.2100 (ppm)
Ni (231.604 nm)	0.0031	ppm	0.0009	29.36	1.3200	0.0031 (ppm)
P (213.618 nm)	0.2132	ppm	0.0022	1.04	162.9000	0.2132 (ppm)
Pb (220.353 nm)	0.0016	ppm	0.0009	56.49	12.4600	0.0016 (ppm)
Sb (206.834 nm)	-0.0028 u	ppm	0.0014	51.24	0.1449	-0.0028 u (ppm)
Se (196.026 nm)	0.0068	ppm	0.0043	63.32	5.4970	0.0068 (ppm)
Si (251.611 nm)	23.5700	ppm	0.0535	0.23	49090.0000	23.5700 (ppm)
Sn (189.925 nm)	-0.0048 u	ppm	0.0008	15.64	-3.0820	-0.0048 u (ppm)
Sr (421.552 nm)	0.2011	ppm	0.0001	0.03	69780.0000	0.2011 (ppm)
Ti (336.122 nm)	0.0000 u	ppm	0.0001	> 100.00	-180.3000	0.0000 u (ppm)
Tl (190.794 nm)	0.0044	ppm	0.0016	36.59	10.2900	0.0044 (ppm)
V (292.401 nm)	0.0015	ppm	0.0001	4.32	153.8000	0.0015 (ppm)
W (207.912 nm)	-0.0010 u	ppm	0.0027	> 100.00	-7.6670	-0.0010 u (ppm)
Zn (202.548 nm)	0.0204	ppm	0.0001	0.69	323.6000	0.0204 (ppm)
Zr (343.823 nm)	0.0010	ppm	0.0001	5.05	903.0000	0.0010 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9415	356400.0000	0.0026	0.27
Y_R 371.029	0.9365	47500.0000	0.0026	0.27

Sample Name: 440-259133-J-3-D MS

Date: 1/15/2020 8:16:00 PM

Rack:Tube: 2:56

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.1947	ppm	0.0005	0.24	7878.0000	0.1947 (ppm)
Al (396.152 nm)	0.4372	ppm	0.0015	0.33	13340.0000	0.4372 (ppm)
As (188.980 nm)	0.4109	ppm	0.0065	1.58	245.6000	0.4109 (ppm)
B (249.678 nm)	0.4608	ppm	0.0023	0.50	4875.0000	0.4608 (ppm)
Ba (233.527 nm)	0.4513	ppm	0.0021	0.46	38610.0000	0.4513 (ppm)
Be (234.861 nm)	0.4097	ppm	0.0010	0.25	64300.0000	0.4097 (ppm)
Ca (422.673 nm)	24.4500	ppm	0.0680	0.28	95400.0000	24.4500 (ppm)
Cd (214.439 nm)	0.4022	ppm	0.0001	0.02	8679.0000	0.4022 (ppm)
Co (228.615 nm)	0.3920	ppm	0.0025	0.63	5060.0000	0.3920 (ppm)
Cr (205.560 nm)	0.3996	ppm	0.0006	0.15	1774.0000	0.3996 (ppm)
Cu (324.754 nm)	0.4167	ppm	0.0006	0.14	16420.0000	0.4167 (ppm)
Fe (238.204 nm)	0.3706	ppm	0.0036	0.97	880.4000	0.3706 (ppm)
K (766.491 nm)	5.2040	ppm	0.0209	0.40	5188.0000	5.2040 (ppm)
Li (670.783 nm)	0.4051	ppm	0.0007	0.17	23240.0000	0.4051 (ppm)
Mg (279.078 nm)	20.1900	ppm	0.0829	0.41	54530.0000	20.1900 (ppm)
Mn (259.372 nm)	0.3999	ppm	0.0003	0.07	37240.0000	0.3999 (ppm)
Mo (204.598 nm)	0.3548	ppm	0.0008	0.23	1366.0000	0.3548 (ppm)
Na (589.592 nm)	84.5600	ppm	0.1525	0.18	446700.0000	84.5600 (ppm)
Ni (231.604 nm)	0.3936	ppm	0.0007	0.17	1714.0000	0.3936 (ppm)
P (213.618 nm)	0.6074	ppm	0.0030	0.49	439.7000	0.6074 (ppm)
Pb (220.353 nm)	0.3906	ppm	0.0038	0.98	780.4000	0.3906 (ppm)
Sb (206.834 nm)	0.4358	ppm	0.0075	1.72	384.6000	0.4358 (ppm)
Se (196.026 nm)	0.4117	ppm	0.0079	1.93	254.0000	0.4117 (ppm)
Si (251.611 nm)	22.4100	ppm	0.0873	0.39	46750.0000	22.4100 (ppm)
Sn (189.925 nm)	0.3221	ppm	0.0042	1.31	185.5000	0.3221 (ppm)
Sr (421.552 nm)	0.5742	ppm	0.0020	0.34	198800.0000	0.5742 (ppm)
Ti (336.122 nm)	0.3875	ppm	0.0047	1.20	38720.0000	0.3875 (ppm)
Tl (190.794 nm)	0.3256	ppm	0.0113	3.48	353.8000	0.3256 (ppm)
V (292.401 nm)	0.4107	ppm	0.0001	0.03	12570.0000	0.4107 (ppm)
W (207.912 nm)	0.3588	ppm	0.0009	0.24	583.0000	0.3588 (ppm)
Zn (202.548 nm)	0.4245	ppm	0.0003	0.08	6588.0000	0.4245 (ppm)
Zr (343.823 nm)	0.3029	ppm	0.0131	4.32	25310.0000	0.3029 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9442	357400.0000	0.0045	0.48
Y_R 371.029	0.9359	47470.0000	0.0011	0.12

Sample Name: 440-259133-J-3-E MSD

Date: 1/15/2020 8:19:12 PM

Rack:Tube: 2:57

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.2265	ppm	0.0003	0.14	9167.0000	0.2265 (ppm)
Al (396.152 nm)	0.4999	ppm	0.0004	0.08	15370.0000	0.4999 (ppm)
As (188.980 nm)	0.4706	ppm	0.0007	0.15	281.5000	0.4706 (ppm)
B (249.678 nm)	0.5340	ppm	0.0008	0.15	5649.0000	0.5340 (ppm)
Ba (233.527 nm)	0.5223	ppm	0.0014	0.27	44680.0000	0.5223 (ppm)
Be (234.861 nm)	0.4711	ppm	0.0002	0.05	73930.0000	0.4711 (ppm)
Ca (422.673 nm)	29.5800	ppm	0.1237	0.42	115400.0000	29.5800 (ppm)
Cd (214.439 nm)	0.4610	ppm	0.0001	0.02	9948.0000	0.4610 (ppm)
Co (228.615 nm)	0.4465	ppm	0.0005	0.10	5766.0000	0.4465 (ppm)
Cr (205.560 nm)	0.4586	ppm	0.0015	0.32	2036.0000	0.4586 (ppm)
Cu (324.754 nm)	0.4805	ppm	0.0003	0.07	18910.0000	0.4805 (ppm)
Fe (238.204 nm)	0.4444	ppm	0.0124	2.79	1067.0000	0.4444 (ppm)
K (766.491 nm)	5.9920	ppm	0.1498	2.50	5993.0000	5.9920 (ppm)
Li (670.783 nm)	0.4709	ppm	0.0034	0.72	26990.0000	0.4709 (ppm)
Mg (279.078 nm)	24.3600	ppm	0.0627	0.26	65780.0000	24.3600 (ppm)
Mn (259.372 nm)	0.4589	ppm	0.0005	0.10	42760.0000	0.4589 (ppm)
Mo (204.598 nm)	0.4460	ppm	0.0012	0.27	1717.0000	0.4460 (ppm)
Na (589.592 nm)	102.6000	ppm	0.5028	0.49	542000.0000	102.6000 (ppm)
Ni (231.604 nm)	0.4533	ppm	0.0031	0.69	1976.0000	0.4533 (ppm)
P (213.618 nm)	0.7051	ppm	0.0019	0.27	509.2000	0.7051 (ppm)
Pb (220.353 nm)	0.4482	ppm	0.0017	0.37	894.1000	0.4482 (ppm)
Sb (206.834 nm)	0.4986	ppm	0.0023	0.46	439.1000	0.4986 (ppm)
Se (196.026 nm)	0.4669	ppm	0.0009	0.20	287.9000	0.4669 (ppm)
Si (251.611 nm)	26.7600	ppm	0.2190	0.82	55800.0000	26.7600 (ppm)
Sn (189.925 nm)	0.4092	ppm	0.0070	1.71	235.8000	0.4092 (ppm)
Sr (421.552 nm)	0.6730	ppm	0.0040	0.60	233000.0000	0.6730 (ppm)
Ti (336.122 nm)	0.4645	ppm	0.0022	0.47	46460.0000	0.4645 (ppm)
Tl (190.794 nm)	0.4007	ppm	0.0086	2.13	434.9000	0.4007 (ppm)
V (292.401 nm)	0.4745	ppm	0.0008	0.18	14500.0000	0.4745 (ppm)
W (207.912 nm)	0.4404	ppm	0.0047	1.07	716.4000	0.4404 (ppm)
Zn (202.548 nm)	0.4858	ppm	0.0008	0.16	7538.0000	0.4858 (ppm)
Zr (343.823 nm)	0.4474	ppm	0.0071	1.58	37000.0000	0.4474 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9355	354100.0000	0.0022	0.23
Y_R 371.029	0.9247	46900.0000	0.0042	0.46

Sample Name: 320-57758-I-2-A

Date: 1/15/2020 8:22:24 PM

Rack:Tube: 2:58

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0002 u	ppm	0.0006	> 100.00	35.9300	-0.0002 u (ppm)
Al (396.152 nm)	0.1218	ppm	0.0003	0.25	3372.0000	0.1218 (ppm)
As (188.980 nm)	0.0037	ppm	0.0036	96.81	0.8866	0.0037 (ppm)
B (249.678 nm)	0.0096	ppm	0.0007	6.80	89.5400	0.0096 (ppm)
Ba (233.527 nm)	0.0036	ppm	0.0005	13.38	367.0000	0.0036 (ppm)
Be (234.861 nm)	0.0001	ppm	0.0000	35.35	35.1500	0.0001 (ppm)
Ca (422.673 nm)	6.2340	ppm	0.0377	0.61	24390.0000	6.2340 (ppm)
Cd (214.439 nm)	0.0003	ppm	0.0000	2.17	0.8218	0.0003 (ppm)
Co (228.615 nm)	0.0002	ppm	0.0000	4.91	-6.3140	0.0002 (ppm)
Cr (205.560 nm)	0.0004 u	ppm	0.0009	> 100.00	2.4280	0.0004 u (ppm)
Cu (324.754 nm)	0.0019	ppm	0.0001	4.16	203.9000	0.0019 (ppm)
Fe (238.204 nm)	0.1171	ppm	0.0043	3.65	240.0000	0.1171 (ppm)
K (766.491 nm)	1.1070	ppm	0.0723	6.53	1003.0000	1.1070 (ppm)
Li (670.783 nm)	0.0044	ppm	0.0012	26.52	384.4000	0.0044 (ppm)
Mg (279.078 nm)	0.4757	ppm	0.0093	1.96	1299.0000	0.4757 (ppm)
Mn (259.372 nm)	0.0080	ppm	0.0000	0.45	797.8000	0.0080 (ppm)
Mo (204.598 nm)	0.0038	ppm	0.0007	18.30	13.0700	0.0038 (ppm)
Na (589.592 nm)	4.5730	ppm	0.0120	0.26	25010.0000	4.5730 (ppm)
Ni (231.604 nm)	0.0005	ppm	0.0004	88.14	-9.8110	0.0005 (ppm)
P (213.618 nm)	0.0167	ppm	0.0018	10.56	16.4200	0.0167 (ppm)
Pb (220.353 nm)	0.0018	ppm	0.0022	> 100.00	12.1600	0.0018 (ppm)
Sb (206.834 nm)	0.0005 u	ppm	0.0020	> 100.00	2.9390	0.0005 u (ppm)
Se (196.026 nm)	0.0053	ppm	0.0019	36.14	4.6990	0.0053 (ppm)
Si (251.611 nm)	1.4690	ppm	0.0032	0.22	3060.0000	1.4690 (ppm)
Sn (189.925 nm)	0.0027 u	ppm	0.0040	> 100.00	1.1840	0.0027 u (ppm)
Sr (421.552 nm)	0.0275	ppm	0.0004	1.38	9547.0000	0.0275 (ppm)
Ti (336.122 nm)	0.0032	ppm	0.0005	15.76	156.2000	0.0032 (ppm)
Tl (190.794 nm)	0.0027	ppm	0.0009	34.92	8.4660	0.0027 (ppm)
V (292.401 nm)	0.0008	ppm	0.0001	13.82	107.7000	0.0008 (ppm)
W (207.912 nm)	0.0051	ppm	0.0016	31.89	2.9870	0.0051 (ppm)
Zn (202.548 nm)	0.0442	ppm	0.0000	0.11	687.1000	0.0442 (ppm)
Zr (343.823 nm)	0.0008	ppm	0.0000	3.46	879.3000	0.0008 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9756	369200.0000	0.0044	0.45
Y_R 371.029	0.9583	48610.0000	0.0057	0.60

Sample Name: 320-57758-G-5-A

Date: 1/15/2020 8:25:36 PM

Rack:Tube: 2:59

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0004 u	ppm	0.0002	60.55	30.1500	-0.0004 u (ppm)
Al (396.152 nm)	0.0630	ppm	0.0005	0.72	1585.0000	0.0630 (ppm)
As (188.980 nm)	0.0018 u	ppm	0.0054	> 100.00	-0.2734	0.0018 u (ppm)
B (249.678 nm)	0.0118	ppm	0.0001	0.46	112.7000	0.0118 (ppm)
Ba (233.527 nm)	0.0086	ppm	0.0004	4.41	794.9000	0.0086 (ppm)
Be (234.861 nm)	0.0000 u	ppm	0.0001	> 100.00	17.5300	0.0000 u (ppm)
Ca (422.673 nm)	3.3090	ppm	0.0032	0.10	12980.0000	3.3090 (ppm)
Cd (214.439 nm)	0.0000 u	ppm	0.0001	> 100.00	-5.8190	0.0000 u (ppm)
Co (228.615 nm)	0.0004 u	ppm	0.0007	> 100.00	-3.4440	0.0004 u (ppm)
Cr (205.560 nm)	-0.0003 u	ppm	0.0006	> 100.00	-0.6448	-0.0003 u (ppm)
Cu (324.754 nm)	0.0018	ppm	0.0005	25.42	203.8000	0.0018 (ppm)
Fe (238.204 nm)	0.2386	ppm	0.0016	0.69	546.7000	0.2386 (ppm)
K (766.491 nm)	0.9405	ppm	0.1166	12.39	833.2000	0.9405 (ppm)
Li (670.783 nm)	0.0041	ppm	0.0011	25.38	368.2000	0.0041 (ppm)
Mg (279.078 nm)	0.9894	ppm	0.0062	0.63	2685.0000	0.9894 (ppm)
Mn (259.372 nm)	0.0134	ppm	0.0000	0.02	1308.0000	0.0134 (ppm)
Mo (204.598 nm)	0.0007 u	ppm	0.0016	> 100.00	0.8159	0.0007 u (ppm)
Na (589.592 nm)	9.0770	ppm	0.0010	0.01	48760.0000	9.0770 (ppm)
Ni (231.604 nm)	0.0001 u	ppm	0.0003	> 100.00	-11.5500	0.0001 u (ppm)
P (213.618 nm)	0.0094	ppm	0.0049	52.19	11.0000	0.0094 (ppm)
Pb (220.353 nm)	0.0031	ppm	0.0002	6.41	14.8300	0.0031 (ppm)
Sb (206.834 nm)	-0.0001 u	ppm	0.0047	> 100.00	2.5170	-0.0001 u (ppm)
Se (196.026 nm)	-0.0038 u	ppm	0.0029	77.74	-0.8436	-0.0038 u (ppm)
Si (251.611 nm)	1.2180	ppm	0.0085	0.69	2538.0000	1.2180 (ppm)
Sn (189.925 nm)	-0.0026 u	ppm	0.0022	84.12	-1.8600	-0.0026 u (ppm)
Sr (421.552 nm)	0.0189	ppm	0.0000	0.09	6521.0000	0.0189 (ppm)
Ti (336.122 nm)	0.0021	ppm	0.0003	15.06	48.3900	0.0021 (ppm)
Tl (190.794 nm)	0.0045	ppm	0.0051	> 100.00	10.4800	0.0045 (ppm)
V (292.401 nm)	0.0008	ppm	0.0000	4.56	103.0000	0.0008 (ppm)
W (207.912 nm)	0.0036	ppm	0.0008	21.83	0.2246	0.0036 (ppm)
Zn (202.548 nm)	0.0157	ppm	0.0001	0.33	249.9000	0.0157 (ppm)
Zr (343.823 nm)	0.0007	ppm	0.0000	3.69	867.1000	0.0007 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9794	370700.0000	0.0007	0.07
Y_R 371.029	0.9573	48560.0000	0.0040	0.42

Sample Name: CCV 6043773

Date: 1/15/2020 8:28:47 PM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.4842	ppm	0.0027	0.56	19550.0000	0.4842 (ppm)
Al (396.152 nm)	0.9589	ppm	0.0028	0.29	29820.0000	0.9589 (ppm)
As (188.980 nm)	0.9599	ppm	0.0014	0.15	575.5000	0.9599 (ppm)
B (249.678 nm)	0.9616	ppm	0.0063	0.66	10160.0000	0.9616 (ppm)
Ba (233.527 nm)	0.9906	ppm	0.0105	1.06	84680.0000	0.9906 (ppm)
Be (234.861 nm)	0.9706	ppm	0.0046	0.47	152300.0000	0.9706 (ppm)
Ca (422.673 nm)	4.8690	ppm	0.0383	0.79	19060.0000	4.8690 (ppm)
Cd (214.439 nm)	0.9699	ppm	0.0048	0.49	20940.0000	0.9699 (ppm)
Co (228.615 nm)	0.9601	ppm	0.0043	0.44	12410.0000	0.9601 (ppm)
Cr (205.560 nm)	0.9668	ppm	0.0082	0.85	4291.0000	0.9668 (ppm)
Cu (324.754 nm)	0.9698	ppm	0.0026	0.27	38070.0000	0.9698 (ppm)
Fe (238.204 nm)	0.9781	ppm	0.0146	1.49	2412.0000	0.9781 (ppm)
K (766.491 nm)	9.7320	ppm	0.1996	2.05	9800.0000	9.7320 (ppm)
Li (670.783 nm)	0.9845	ppm	0.0086	0.87	56070.0000	0.9845 (ppm)
Mg (279.078 nm)	4.9870	ppm	0.0484	0.97	13480.0000	4.9870 (ppm)
Mn (259.372 nm)	0.9663	ppm	0.0044	0.46	89840.0000	0.9663 (ppm)
Mo (204.598 nm)	0.9614	ppm	0.0019	0.20	3703.0000	0.9614 (ppm)
Na (589.592 nm)	9.8400	ppm	0.1050	1.07	52840.0000	9.8400 (ppm)
Ni (231.604 nm)	0.9657	ppm	0.0043	0.45	4224.0000	0.9657 (ppm)
P (213.618 nm)	0.9844	ppm	0.0044	0.44	695.8000	0.9844 (ppm)
Pb (220.353 nm)	0.9691	ppm	0.0065	0.67	1922.0000	0.9691 (ppm)
Sb (206.834 nm)	0.9654	ppm	0.0260	2.70	846.7000	0.9654 (ppm)
Se (196.026 nm)	0.9799	ppm	0.0098	1.00	603.2000	0.9799 (ppm)
Si (251.611 nm)	4.8650	ppm	0.0612	1.26	10290.0000	4.8650 (ppm)
Sn (189.925 nm)	0.9681	ppm	0.0040	0.41	558.2000	0.9681 (ppm)
Sr (421.552 nm)	0.9679	ppm	0.0092	0.95	334700.0000	0.9679 (ppm)
Ti (336.122 nm)	0.9768	ppm	0.0055	0.56	97910.0000	0.9768 (ppm)
Tl (190.794 nm)	0.9642	ppm	0.0025	0.26	1044.0000	0.9642 (ppm)
V (292.401 nm)	0.9699	ppm	0.0027	0.28	29480.0000	0.9699 (ppm)
W (207.912 nm)	0.9681	ppm	0.0002	0.02	1581.0000	0.9681 (ppm)
Zn (202.548 nm)	0.9715	ppm	0.0061	0.63	15070.0000	0.9715 (ppm)
Zr (343.823 nm)	0.9934	ppm	0.0002	0.02	81160.0000	0.9934 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9586	362800.0000	0.0036	0.38
Y_R 371.029	0.9440	47880.0000	0.0087	0.93

Sample Name: CCB 6043772

Date: 1/15/2020 8:32:00 PM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.0003	ppm	0.0000	8.53	58.6100	0.0003 (ppm)
Al (396.152 nm)	0.0009	ppm	0.0001	11.50	-293.8000	0.0009 (ppm)
As (188.980 nm)	0.0076	ppm	0.0087	> 100.00	3.2880	0.0076 (ppm)
B (249.678 nm)	0.0009	ppm	0.0002	22.00	-3.1990	0.0009 (ppm)
Ba (233.527 nm)	0.0003	ppm	0.0001	24.39	82.0100	0.0003 (ppm)
Be (234.861 nm)	0.0003	ppm	0.0002	56.64	60.0500	0.0003 (ppm)
Ca (422.673 nm)	0.0064	ppm	0.0044	69.59	105.2000	0.0064 (ppm)
Cd (214.439 nm)	0.0001	ppm	0.0002	> 100.00	-3.8330	0.0001 (ppm)
Co (228.615 nm)	-0.0002 u	ppm	0.0001	58.98	-11.0300	-0.0002 u (ppm)
Cr (205.560 nm)	-0.0001 u	ppm	0.0005	> 100.00	0.2671	-0.0001 u (ppm)
Cu (324.754 nm)	0.0009	ppm	0.0001	13.14	168.1000	0.0009 (ppm)
Fe (238.204 nm)	-0.0012 u	ppm	0.0022	> 100.00	-58.6800	-0.0012 u (ppm)
K (766.491 nm)	-0.0324 u	ppm	0.0092	28.52	-158.7000	-0.0324 u (ppm)
Li (670.783 nm)	0.0052	ppm	0.0011	21.25	426.1000	0.0052 (ppm)
Mg (279.078 nm)	0.0048	ppm	0.0004	9.01	27.2100	0.0048 (ppm)
Mn (259.372 nm)	0.0003	ppm	0.0001	38.52	72.6000	0.0003 (ppm)
Mo (204.598 nm)	0.0052	ppm	0.0003	5.11	18.2800	0.0052 (ppm)
Na (589.592 nm)	-0.0436 u	ppm	0.0030	6.91	671.5000	-0.0436 u (ppm)
Ni (231.604 nm)	0.0002 u	ppm	0.0014	> 100.00	-11.2700	0.0002 u (ppm)
P (213.618 nm)	0.0015 u	ppm	0.0051	> 100.00	5.0970	0.0015 u (ppm)
Pb (220.353 nm)	-0.0012 u	ppm	0.0005	43.88	6.3440	-0.0012 u (ppm)
Sb (206.834 nm)	0.0041	ppm	0.0022	55.03	6.0750	0.0041 (ppm)
Se (196.026 nm)	0.0031	ppm	0.0016	50.32	3.4150	0.0031 (ppm)
Si (251.611 nm)	0.0025	ppm	0.0034	> 100.00	4.8950	0.0025 (ppm)
Sn (189.925 nm)	0.0007	ppm	0.0006	87.57	0.0433	0.0007 (ppm)
Sr (421.552 nm)	0.0002	ppm	0.0001	33.56	34.8700	0.0002 (ppm)
Ti (336.122 nm)	0.0022	ppm	0.0005	24.45	62.0900	0.0022 (ppm)
Tl (190.794 nm)	0.0037	ppm	0.0043	> 100.00	9.5880	0.0037 (ppm)
V (292.401 nm)	0.0006	ppm	0.0001	12.11	93.0100	0.0006 (ppm)
W (207.912 nm)	0.0057	ppm	0.0011	19.02	3.4530	0.0057 (ppm)
Zn (202.548 nm)	0.0006	ppm	0.0000	5.88	18.2300	0.0006 (ppm)
Zr (343.823 nm)	0.0005	ppm	0.0000	1.89	852.1000	0.0005 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

**Internal Standards Results**

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9706	367400.0000	0.0032	0.33
Y_R 371.029	0.9537	48370.0000	0.0022	0.23

Sample Name: 720-96901-K-3-A

Date: 1/15/2020 8:35:12 PM

Rack:Tube: 2:60

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0007 u	ppm	0.0000	3.59	4.1130	-0.0007 u (ppm)
Al (396.152 nm)	0.2817	ppm	0.0004	0.16	8301.0000	0.2817 (ppm)
As (188.980 nm)	0.0040	ppm	0.0014	33.52	0.5014	0.0040 (ppm)
B (249.678 nm)	0.1497	ppm	0.0011	0.75	1588.0000	0.1497 (ppm)
Ba (233.527 nm)	0.0298	ppm	0.0001	0.40	2610.0000	0.0298 (ppm)
Be (234.861 nm)	0.0000 u	ppm	0.0000	52.24	17.7200	0.0000 u (ppm)
Ca (422.673 nm)	172.0000	ppm	2.2110	1.29	670600.0000	172.0000 (ppm)
Cd (214.439 nm)	0.0004	ppm	0.0001	33.92	2.7490	0.0004 (ppm)
Co (228.615 nm)	0.0017	ppm	0.0006	36.08	15.4600	0.0017 (ppm)
Cr (205.560 nm)	0.0085	ppm	0.0011	13.26	40.5600	0.0085 (ppm)
Cu (324.754 nm)	0.0184	ppm	0.0004	2.05	725.7000	0.0184 (ppm)
Fe (238.204 nm)	0.3272	ppm	0.0021	0.64	772.0000	0.3272 (ppm)
K (766.491 nm)	28.5100	ppm	0.1006	0.35	28940.0000	28.5100 (ppm)
Li (670.783 nm)	0.0068	ppm	0.0013	19.55	761.4000	0.0068 (ppm)
Mg (279.078 nm)	13.7800	ppm	0.0734	0.53	37230.0000	13.7800 (ppm)
Mn (259.372 nm)	0.0409	ppm	0.0000	0.11	3917.0000	0.0409 (ppm)
Mo (204.598 nm)	0.0025	ppm	0.0004	15.53	7.9980	0.0025 (ppm)
Na (589.592 nm)	62.2900	ppm	0.0760	0.12	329400.0000	62.2900 (ppm)
Ni (231.604 nm)	0.0045	ppm	0.0003	6.73	5.3890	0.0045 (ppm)
P (213.618 nm)	11.8200	ppm	0.0734	0.62	8815.0000	11.8200 (ppm)
Pb (220.353 nm)	-0.0011 u	ppm	0.0014	> 100.00	7.6060	-0.0011 u (ppm)
Sb (206.834 nm)	-0.0003 u	ppm	0.0064	> 100.00	2.8260	-0.0003 u (ppm)
Se (196.026 nm)	-0.0017 u	ppm	0.0058	> 100.00	-0.3643	-0.0017 u (ppm)
Si (251.611 nm)	9.3800	ppm	0.0113	0.12	19550.0000	9.3800 (ppm)
Sn (189.925 nm)	-0.0101 u	ppm	0.0037	37.19	-6.1160	-0.0101 u (ppm)
Sr (421.552 nm)	0.3307	ppm	0.0004	0.13	116100.0000	0.3307 (ppm)
Ti (336.122 nm)	0.0014	ppm	0.0002	13.65	-153.2000	0.0014 (ppm)
Tl (190.794 nm)	0.0045	ppm	0.0034	77.00	9.6140	0.0045 (ppm)
V (292.401 nm)	-0.0046 u	ppm	0.0003	7.49	136.1000	-0.0046 u (ppm)
W (207.912 nm)	0.0000 u	ppm	0.0012	> 100.00	-6.5310	0.0000 u (ppm)
Zn (202.548 nm)	0.1416	ppm	0.0005	0.38	2143.0000	0.1416 (ppm)
Zr (343.823 nm)	0.0056	ppm	0.0005	8.72	1287.0000	0.0056 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9363	354400.0000	0.0019	0.20
Y_R 371.029	0.9376	47560.0000	0.0059	0.63

Sample Name: 440-258685-N-1-E

Date: 1/15/2020 8:38:24 PM

Rack:Tube: 3:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0008 u	ppm	0.0002	28.82	8.8410	-0.0008 u (ppm)
Al (396.152 nm)	0.0836	ppm	0.0002	0.18	2266.0000	0.0836 (ppm)
As (188.980 nm)	0.0021	ppm	0.0018	86.60	-0.2179	0.0021 (ppm)
B (249.678 nm)	0.2946	ppm	0.0009	0.30	3135.0000	0.2946 (ppm)
Ba (233.527 nm)	0.0179	ppm	0.0001	0.49	1590.0000	0.0179 (ppm)
Be (234.861 nm)	0.0000 u	ppm	0.0000	61.91	11.7800	0.0000 u (ppm)
Ca (422.673 nm)	49.2000	ppm	0.0758	0.15	191900.0000	49.2000 (ppm)
Cd (214.439 nm)	0.0001 u	ppm	0.0002	> 100.00	-3.8110	0.0001 u (ppm)
Co (228.615 nm)	0.0010	ppm	0.0007	64.74	5.6600	0.0010 (ppm)
Cr (205.560 nm)	0.0005 u	ppm	0.0010	> 100.00	3.4250	0.0005 u (ppm)
Cu (324.754 nm)	0.0027	ppm	0.0002	6.25	207.1000	0.0027 (ppm)
Fe (238.204 nm)	0.0761	ppm	0.0010	1.28	138.3000	0.0761 (ppm)
K (766.491 nm)	14.0400	ppm	0.1305	0.93	14190.0000	14.0400 (ppm)
Li (670.783 nm)	0.0166	ppm	0.0034	20.65	1216.0000	0.0166 (ppm)
Mg (279.078 nm)	25.4200	ppm	0.0291	0.11	68650.0000	25.4200 (ppm)
Mn (259.372 nm)	0.0673	ppm	0.0003	0.43	6359.0000	0.0673 (ppm)
Mo (204.598 nm)	0.0021	ppm	0.0006	28.29	6.2270	0.0021 (ppm)
Na (589.592 nm)	157.3000	ppm	0.0520	0.03	830400.0000	157.3000 (ppm)
Ni (231.604 nm)	0.0003 u	ppm	0.0013	> 100.00	-11.6300	0.0003 u (ppm)
P (213.618 nm)	0.1553	ppm	0.0090	5.78	119.4000	0.1553 (ppm)
Pb (220.353 nm)	0.0020	ppm	0.0005	25.18	13.5700	0.0020 (ppm)
Sb (206.834 nm)	-0.0033 u	ppm	0.0057	> 100.00	-0.2925	-0.0033 u (ppm)
Se (196.026 nm)	0.0075	ppm	0.0091	> 100.00	5.8370	0.0075 (ppm)
Si (251.611 nm)	3.1810	ppm	0.0131	0.41	6629.0000	3.1810 (ppm)
Sn (189.925 nm)	-0.0090 u	ppm	0.0004	4.91	-5.5160	-0.0090 u (ppm)
Sr (421.552 nm)	0.4167	ppm	0.0000	0.01	144600.0000	0.4167 (ppm)
Ti (336.122 nm)	0.0001	ppm	0.0001	68.91	-184.6000	0.0001 (ppm)
Tl (190.794 nm)	0.0039	ppm	0.0018	46.86	9.7490	0.0039 (ppm)
V (292.401 nm)	-0.0004 u	ppm	0.0004	96.17	121.3000	-0.0004 u (ppm)
W (207.912 nm)	-0.0026 u	ppm	0.0052	> 100.00	-10.6900	-0.0026 u (ppm)
Zn (202.548 nm)	0.0113	ppm	0.0002	1.54	178.0000	0.0113 (ppm)
Zr (343.823 nm)	0.0018	ppm	0.0003	14.75	969.0000	0.0018 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9331	353200.0000	0.0015	0.17
Y_R 371.029	0.9355	47450.0000	0.0022	0.23

Sample Name: 440-258707-J-1-D

Date: 1/15/2020 8:41:36 PM

Rack:Tube: 3:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0004 u	ppm	0.0002	49.42	16.4700	-0.0004 u (ppm)
Al (396.152 nm)	3.5630	ppm	0.0112	0.31	107700.0000	3.5630 (ppm)
As (188.980 nm)	0.0125	ppm	0.0021	16.74	5.8330	0.0125 (ppm)
B (249.678 nm)	0.0679	ppm	0.0005	0.71	705.7000	0.0679 (ppm)
Ba (233.527 nm)	0.0955	ppm	0.0004	0.42	8220.0000	0.0955 (ppm)
Be (234.861 nm)	0.0003	ppm	0.0000	3.00	161.0000	0.0003 (ppm)
Ca (422.673 nm)	25.4100	ppm	0.0751	0.30	99160.0000	25.4100 (ppm)
Cd (214.439 nm)	0.0003	ppm	0.0002	57.17	0.9489	0.0003 (ppm)
Co (228.615 nm)	0.0053	ppm	0.0005	9.06	63.2700	0.0053 (ppm)
Cr (205.560 nm)	0.0041	ppm	0.0003	6.42	19.4300	0.0041 (ppm)
Cu (324.754 nm)	0.0148	ppm	0.0002	1.51	698.3000	0.0148 (ppm)
Fe (238.204 nm)	6.3050	ppm	0.0056	0.09	15860.0000	6.3050 (ppm)
K (766.491 nm)	3.2390	ppm	0.0234	0.72	3183.0000	3.2390 (ppm)
Li (670.783 nm)	0.0135	ppm	0.0027	19.69	936.4000	0.0135 (ppm)
Mg (279.078 nm)	12.9900	ppm	0.0743	0.57	35070.0000	12.9900 (ppm)
Mn (259.372 nm)	0.2470	ppm	0.0009	0.35	23600.0000	0.2470 (ppm)
Mo (204.598 nm)	0.0053	ppm	0.0003	6.49	19.2900	0.0053 (ppm)
Na (589.592 nm)	72.6100	ppm	0.2514	0.35	383800.0000	72.6100 (ppm)
Ni (231.604 nm)	0.0044	ppm	0.0003	6.60	6.3950	0.0044 (ppm)
P (213.618 nm)	0.2950	ppm	0.0026	0.89	223.6000	0.2950 (ppm)
Pb (220.353 nm)	0.0254	ppm	0.0001	0.50	56.6200	0.0254 (ppm)
Sb (206.834 nm)	0.0013 u	ppm	0.0074	> 100.00	3.7630	0.0013 u (ppm)
Se (196.026 nm)	0.0030	ppm	0.0028	94.26	1.8220	0.0030 (ppm)
Si (251.611 nm)	11.5800	ppm	0.0213	0.18	24120.0000	11.5800 (ppm)
Sn (189.925 nm)	0.0005 u	ppm	0.0049	> 100.00	-0.0608	0.0005 u (ppm)
Sr (421.552 nm)	0.1272	ppm	0.0002	0.14	44210.0000	0.1272 (ppm)
Ti (336.122 nm)	0.1174	ppm	0.0016	1.37	11610.0000	0.1174 (ppm)
Tl (190.794 nm)	0.0031	ppm	0.0009	28.02	8.0950	0.0031 (ppm)
V (292.401 nm)	0.0113	ppm	0.0001	1.21	451.9000	0.0113 (ppm)
W (207.912 nm)	0.0014	ppm	0.0003	20.07	-3.6180	0.0014 (ppm)
Zn (202.548 nm)	0.0291	ppm	0.0000	0.02	453.6000	0.0291 (ppm)
Zr (343.823 nm)	0.0052	ppm	0.0006	11.88	1114.0000	0.0052 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9554	361600.0000	0.0041	0.43
Y_R 371.029	0.9447	47920.0000	0.0030	0.32

Sample Name: xRINSE 6043786

Date: 1/15/2020 8:44:48 PM

Rack:Tube: S1:8

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.0001	ppm	0.0000	64.07	48.7000	0.0001 (ppm)
Al (396.152 nm)	0.0023	ppm	0.0001	5.26	-255.9000	0.0023 (ppm)
As (188.980 nm)	0.0044	ppm	0.0048	> 100.00	1.3450	0.0044 (ppm)
B (249.678 nm)	0.0001 u	ppm	0.0006	> 100.00	-11.3100	0.0001 u (ppm)
Ba (233.527 nm)	0.0001	ppm	0.0000	1.50	67.7300	0.0001 (ppm)
Be (234.861 nm)	0.0000	ppm	0.0000	5.19	20.2300	0.0000 (ppm)
Ca (422.673 nm)	0.0094	ppm	0.0077	81.92	117.0000	0.0094 (ppm)
Cd (214.439 nm)	-0.0001 u	ppm	0.0000	16.04	-8.9940	-0.0001 u (ppm)
Co (228.615 nm)	0.0000 u	ppm	0.0003	> 100.00	-8.3280	0.0000 u (ppm)
Cr (205.560 nm)	0.0000 u	ppm	0.0002	> 100.00	0.3397	0.0000 u (ppm)
Cu (324.754 nm)	0.0004	ppm	0.0001	30.47	152.0000	0.0004 (ppm)
Fe (238.204 nm)	0.0071	ppm	0.0024	34.49	-37.6800	0.0071 (ppm)
K (766.491 nm)	-0.1059 u	ppm	0.0517	48.86	-233.6000	-0.1059 u (ppm)
Li (670.783 nm)	0.0051	ppm	0.0004	8.64	419.4000	0.0051 (ppm)
Mg (279.078 nm)	0.0037 u	ppm	0.0058	> 100.00	24.3700	0.0037 u (ppm)
Mn (259.372 nm)	0.0001	ppm	0.0000	18.43	54.1800	0.0001 (ppm)
Mo (204.598 nm)	-0.0011 u	ppm	0.0002	15.68	-6.0860	-0.0011 u (ppm)
Na (589.592 nm)	-0.0208 u	ppm	0.0161	77.32	791.4000	-0.0208 u (ppm)
Ni (231.604 nm)	0.0017	ppm	0.0009	55.18	-4.6050	0.0017 (ppm)
P (213.618 nm)	0.0001 u	ppm	0.0041	> 100.00	4.1610	0.0001 u (ppm)
Pb (220.353 nm)	0.0012	ppm	0.0009	72.97	11.1100	0.0012 (ppm)
Sb (206.834 nm)	0.0022	ppm	0.0020	91.39	4.5420	0.0022 (ppm)
Se (196.026 nm)	0.0051	ppm	0.0047	92.17	4.6200	0.0051 (ppm)
Si (251.611 nm)	0.0017 u	ppm	0.0037	> 100.00	2.8650	0.0017 u (ppm)
Sn (189.925 nm)	-0.0007 u	ppm	0.0023	> 100.00	-0.7325	-0.0007 u (ppm)
Sr (421.552 nm)	-0.0001 u	ppm	0.0001	> 100.00	-60.5200	-0.0001 u (ppm)
Ti (336.122 nm)	0.0003	ppm	0.0003	> 100.00	-130.0000	0.0003 (ppm)
Tl (190.794 nm)	0.0032	ppm	0.0006	20.10	9.0810	0.0032 (ppm)
V (292.401 nm)	0.0005	ppm	0.0003	61.73	92.1000	0.0005 (ppm)
W (207.912 nm)	0.0034	ppm	0.0014	40.82	-0.3409	0.0034 (ppm)
Zn (202.548 nm)	0.0006	ppm	0.0002	35.75	18.4600	0.0006 (ppm)
Zr (343.823 nm)	0.0004	ppm	0.0002	51.28	848.2000	0.0004 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9759	369400.0000	0.0002	0.02
Y_R 371.029	0.9490	48130.0000	0.0005	0.05

Sample Name: MB 440-590693/1-A

Date: 1/15/2020 8:48:00 PM

Rack:Tube: 3:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0003 u	ppm	0.0001	25.66	32.1500	-0.0003 u (ppm)
Al (396.152 nm)	0.0114	ppm	0.0003	2.56	20.8800	0.0114 (ppm)
As (188.980 nm)	0.0064	ppm	0.0030	47.26	2.4440	0.0064 (ppm)
B (249.678 nm)	0.0020	ppm	0.0004	17.54	9.1010	0.0020 (ppm)
Ba (233.527 nm)	0.0003	ppm	0.0000	1.34	88.1800	0.0003 (ppm)
Be (234.861 nm)	0.0000 u	ppm	0.0000	83.57	10.2900	0.0000 u (ppm)
Ca (422.673 nm)	0.0295	ppm	0.0010	3.30	195.2000	0.0295 (ppm)
Cd (214.439 nm)	0.0001 u	ppm	0.0002	> 100.00	-3.9950	0.0001 u (ppm)
Co (228.615 nm)	0.0001 u	ppm	0.0014	> 100.00	-7.6840	0.0001 u (ppm)
Cr (205.560 nm)	0.0121	ppm	0.0003	2.43	54.1900	0.0121 (ppm)
Cu (324.754 nm)	0.0004	ppm	0.0002	44.88	149.7000	0.0004 (ppm)
Fe (238.204 nm)	0.0625	ppm	0.0008	1.25	102.2000	0.0625 (ppm)
K (766.491 nm)	-0.0273 u	ppm	0.0030	10.83	-153.5000	-0.0273 u (ppm)
Li (670.783 nm)	0.0056	ppm	0.0008	13.40	447.3000	0.0056 (ppm)
Mg (279.078 nm)	0.0075	ppm	0.0015	19.64	34.6400	0.0075 (ppm)
Mn (259.372 nm)	0.0016	ppm	0.0000	1.98	197.1000	0.0016 (ppm)
Mo (204.598 nm)	0.0008	ppm	0.0000	3.59	1.2720	0.0008 (ppm)
Na (589.592 nm)	-0.0114 u	ppm	0.0003	3.04	841.3000	-0.0114 u (ppm)
Ni (231.604 nm)	0.0075	ppm	0.0007	9.02	21.2000	0.0075 (ppm)
P (213.618 nm)	-0.0051 u	ppm	0.0002	4.03	0.2797	-0.0051 u (ppm)
Pb (220.353 nm)	0.0006 u	ppm	0.0011	> 100.00	9.7670	0.0006 u (ppm)
Sb (206.834 nm)	0.0037	ppm	0.0009	24.71	5.8990	0.0037 (ppm)
Se (196.026 nm)	0.0081	ppm	0.0054	66.34	6.4220	0.0081 (ppm)
Si (251.611 nm)	0.0036	ppm	0.0010	27.17	6.8150	0.0036 (ppm)
Sn (189.925 nm)	-0.0036 u	ppm	0.0025	70.08	-2.4040	-0.0036 u (ppm)
Sr (421.552 nm)	0.0001	ppm	0.0001	> 100.00	-15.6200	0.0001 (ppm)
Ti (336.122 nm)	0.0001 u	ppm	0.0003	> 100.00	-147.8000	0.0001 u (ppm)
Tl (190.794 nm)	-0.0015 u	ppm	0.0022	> 100.00	3.8320	-0.0015 u (ppm)
V (292.401 nm)	0.0000 u	ppm	0.0000	> 100.00	74.9500	0.0000 u (ppm)
W (207.912 nm)	0.0015	ppm	0.0014	88.59	-3.2380	0.0015 (ppm)
Zn (202.548 nm)	0.0071	ppm	0.0001	1.30	117.2000	0.0071 (ppm)
Zr (343.823 nm)	0.0007	ppm	0.0000	5.67	871.9000	0.0007 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9658	365500.0000	0.0002	0.02
Y_R 371.029	0.9451	47940.0000	0.0025	0.26

Sample Name: LCS 440-590693/2-A

Date: 1/15/2020 8:51:12 PM

Rack:Tube: 3:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.4706	ppm	0.0005	0.10	19000.0000	0.4706 (ppm)
Al (396.152 nm)	0.9547	ppm	0.0030	0.32	29730.0000	0.9547 (ppm)
As (188.980 nm)	0.9339	ppm	0.0031	0.33	559.8000	0.9339 (ppm)
B (249.678 nm)	0.9376	ppm	0.0016	0.17	9905.0000	0.9376 (ppm)
Ba (233.527 nm)	0.9737	ppm	0.0027	0.28	83230.0000	0.9737 (ppm)
Be (234.861 nm)	0.9486	ppm	0.0011	0.11	148800.0000	0.9486 (ppm)
Ca (422.673 nm)	4.8160	ppm	0.0080	0.17	18860.0000	4.8160 (ppm)
Cd (214.439 nm)	0.9495	ppm	0.0005	0.05	20490.0000	0.9495 (ppm)
Co (228.615 nm)	0.9434	ppm	0.0024	0.26	12190.0000	0.9434 (ppm)
Cr (205.560 nm)	0.9488	ppm	0.0062	0.65	4211.0000	0.9488 (ppm)
Cu (324.754 nm)	0.9629	ppm	0.0046	0.48	37800.0000	0.9629 (ppm)
Fe (238.204 nm)	0.9950	ppm	0.0108	1.09	2454.0000	0.9950 (ppm)
K (766.491 nm)	9.5820	ppm	0.1170	1.22	9648.0000	9.5820 (ppm)
Li (670.783 nm)	0.9723	ppm	0.0032	0.33	55370.0000	0.9723 (ppm)
Mg (279.078 nm)	4.9290	ppm	0.0211	0.43	13320.0000	4.9290 (ppm)
Mn (259.372 nm)	0.9492	ppm	0.0010	0.10	88290.0000	0.9492 (ppm)
Mo (204.598 nm)	1.0150	ppm	0.0012	0.12	3908.0000	1.0150 (ppm)
Na (589.592 nm)	9.5700	ppm	0.0186	0.19	51420.0000	9.5700 (ppm)
Ni (231.604 nm)	0.9427	ppm	0.0005	0.05	4124.0000	0.9427 (ppm)
P (213.618 nm)	0.9595	ppm	0.0029	0.30	676.6000	0.9595 (ppm)
Pb (220.353 nm)	0.9386	ppm	0.0025	0.27	1861.0000	0.9386 (ppm)
Sb (206.834 nm)	0.9943	ppm	0.0016	0.16	871.1000	0.9943 (ppm)
Se (196.026 nm)	0.9112	ppm	0.0070	0.77	561.5000	0.9112 (ppm)
Si (251.611 nm)	4.7000	ppm	0.0323	0.69	9953.0000	4.7000 (ppm)
Sn (189.925 nm)	0.9501	ppm	0.0076	0.80	547.8000	0.9501 (ppm)
Sr (421.552 nm)	0.9543	ppm	0.0017	0.18	330000.0000	0.9543 (ppm)
Ti (336.122 nm)	0.9727	ppm	0.0036	0.37	97490.0000	0.9727 (ppm)
Tl (190.794 nm)	0.8727	ppm	0.0258	2.96	942.8000	0.8727 (ppm)
V (292.401 nm)	0.9592	ppm	0.0001	0.01	29140.0000	0.9592 (ppm)
W (207.912 nm)	0.9853	ppm	0.0012	0.12	1609.0000	0.9853 (ppm)
Zn (202.548 nm)	0.9404	ppm	0.0035	0.37	14590.0000	0.9404 (ppm)
Zr (343.823 nm)	0.9600	ppm	0.0035	0.36	78460.0000	0.9600 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9540	361100.0000	0.0019	0.20
Y_R 371.029	0.9341	47380.0000	0.0036	0.38

Sample Name: 440-259111-E-1-A sd@5

Date: 1/15/2020 8:54:24 PM

Rack:Tube: 3:5

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0001 u	ppm	0.0004	> 100.00	37.2700	-0.0001 u (ppm)
Al (396.152 nm)	0.1402	ppm	0.0000	0.01	3945.0000	0.1402 (ppm)
As (188.980 nm)	0.0030	ppm	0.0000	0.77	0.3327	0.0030 (ppm)
B (249.678 nm)	0.1317	ppm	0.0002	0.12	1393.0000	0.1317 (ppm)
Ba (233.527 nm)	0.0437	ppm	0.0004	0.91	3798.0000	0.0437 (ppm)
Be (234.861 nm)	0.0004	ppm	0.0001	28.15	89.8200	0.0004 (ppm)
Ca (422.673 nm)	22.8100	ppm	0.1195	0.52	89030.0000	22.8100 (ppm)
Cd (214.439 nm)	0.0004	ppm	0.0001	36.30	2.3340	0.0004 (ppm)
Co (228.615 nm)	0.0009	ppm	0.0005	61.24	3.0020	0.0009 (ppm)
Cr (205.560 nm)	0.0009	ppm	0.0001	15.57	4.8920	0.0009 (ppm)
Cu (324.754 nm)	0.0008	ppm	0.0003	38.18	148.5000	0.0008 (ppm)
Fe (238.204 nm)	1.0310	ppm	0.0025	0.24	2548.0000	1.0310 (ppm)
K (766.491 nm)	6.8590	ppm	0.0160	0.23	6867.0000	6.8590 (ppm)
Li (670.783 nm)	0.0249	ppm	0.0010	4.05	1591.0000	0.0249 (ppm)
Mg (279.078 nm)	6.2060	ppm	0.0212	0.34	16770.0000	6.2060 (ppm)
Mn (259.372 nm)	0.0223	ppm	0.0002	0.80	2246.0000	0.0223 (ppm)
Mo (204.598 nm)	0.0068	ppm	0.0018	26.38	24.5500	0.0068 (ppm)
Na (589.592 nm)	167.7000	ppm	1.3300	0.79	885000.0000	167.7000 (ppm)
Ni (231.604 nm)	-0.0002 u	ppm	0.0002	68.59	-13.3500	-0.0002 u (ppm)
P (213.618 nm)	0.1194	ppm	0.0020	1.69	92.9000	0.1194 (ppm)
Pb (220.353 nm)	0.0032 u	ppm	0.0047	> 100.00	14.8500	0.0032 u (ppm)
Sb (206.834 nm)	0.0019	ppm	0.0009	50.77	4.1710	0.0019 (ppm)
Se (196.026 nm)	0.0540	ppm	0.0020	3.70	34.0500	0.0540 (ppm)
Si (251.611 nm)	0.6941	ppm	0.0007	0.10	1447.0000	0.6941 (ppm)
Sn (189.925 nm)	-0.0002 u	ppm	0.0006	> 100.00	-0.4459	-0.0002 u (ppm)
Sr (421.552 nm)	0.7734	ppm	0.0046	0.60	267600.0000	0.7734 (ppm)
Ti (336.122 nm)	0.0024	ppm	0.0003	11.58	68.6800	0.0024 (ppm)
Tl (190.794 nm)	0.0051	ppm	0.0017	33.28	11.1500	0.0051 (ppm)
V (292.401 nm)	0.0017	ppm	0.0003	15.98	152.7000	0.0017 (ppm)
W (207.912 nm)	0.0039	ppm	0.0014	34.69	0.7743	0.0039 (ppm)
Zn (202.548 nm)	0.0456	ppm	0.0004	0.83	705.1000	0.0456 (ppm)
Zr (343.823 nm)	0.0057	ppm	0.0002	3.17	1257.0000	0.0057 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9304	352100.0000	0.0031	0.33
Y_R 371.029	0.9333	47340.0000	0.0011	0.12

Sample Name: 440-259111-E-1-A

Date: 1/15/2020 8:57:36 PM

Rack:Tube: 3:6

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	-0.0011 u	ppm	0.0000	0.15	-13.8500	-0.0011 u (ppm)
Al (396.152 nm)	0.7459	ppm	0.0035	0.47	22390.0000	0.7459 (ppm)
As (188.980 nm)	0.0087	ppm	0.0073	83.52	3.2800	0.0087 (ppm)
B (249.678 nm)	0.6840	ppm	0.0019	0.27	7289.0000	0.6840 (ppm)
Ba (233.527 nm)	0.2185	ppm	0.0007	0.33	18740.0000	0.2185 (ppm)
Be (234.861 nm)	0.0000 u	ppm	0.0001	> 100.00	95.7900	0.0000 u (ppm)
Ca (422.673 nm)	119.7000	ppm	0.2189	0.18	466800.0000	119.7000 (ppm)
Cd (214.439 nm)	0.0001	ppm	0.0001	> 100.00	-4.2300	0.0001 (ppm)
Co (228.615 nm)	0.0027	ppm	0.0006	23.26	28.5200	0.0027 (ppm)
Cr (205.560 nm)	0.0013	ppm	0.0003	23.81	8.1830	0.0013 (ppm)
Cu (324.754 nm)	0.0018	ppm	0.0000	0.13	121.3000	0.0018 (ppm)
Fe (238.204 nm)	5.4680	ppm	0.0244	0.45	13750.0000	5.4680 (ppm)
K (766.491 nm)	36.4700	ppm	0.0830	0.23	37060.0000	36.4700 (ppm)
Li (670.783 nm)	0.1062	ppm	0.0024	2.25	6399.0000	0.1062 (ppm)
Mg (279.078 nm)	30.9400	ppm	0.0886	0.29	83540.0000	30.9400 (ppm)
Mn (259.372 nm)	0.1128	ppm	0.0003	0.28	11190.0000	0.1128 (ppm)
Mo (204.598 nm)	0.0166	ppm	0.0005	2.72	62.2700	0.0166 (ppm)
Na (589.592 nm)	844.5000 o	ppm	0.3190	0.04	4453000.0000	844.5000 o (ppm)
Ni (231.604 nm)	0.0025	ppm	0.0004	17.44	-3.2780	0.0025 (ppm)
P (213.618 nm)	0.6493	ppm	0.0106	1.63	487.2000	0.6493 (ppm)
Pb (220.353 nm)	0.0017	ppm	0.0013	81.24	11.0800	0.0017 (ppm)
Sb (206.834 nm)	-0.0041 u	ppm	0.0019	46.52	-1.0710	-0.0041 u (ppm)
Se (196.026 nm)	0.2516	ppm	0.0045	1.78	153.0000	0.2516 (ppm)
Si (251.611 nm)	3.6450	ppm	0.0046	0.13	7601.0000	3.6450 (ppm)
Sn (189.925 nm)	-0.0104 u	ppm	0.0003	3.36	-6.2490	-0.0104 u (ppm)
Sr (421.552 nm)	4.0370	ppm	0.0066	0.16	1397000.0000	4.0370 (ppm)
Ti (336.122 nm)	0.0051	ppm	0.0002	3.04	259.5000	0.0051 (ppm)
Tl (190.794 nm)	0.0057	ppm	0.0013	22.14	11.6500	0.0057 (ppm)
V (292.401 nm)	0.0068	ppm	0.0005	6.95	419.2000	0.0068 (ppm)
W (207.912 nm)	-0.0014 u	ppm	0.0029	> 100.00	-6.9620	-0.0014 u (ppm)
Zn (202.548 nm)	0.2221	ppm	0.0002	0.08	3401.0000	0.2221 (ppm)
Zr (343.823 nm)	0.0379	ppm	0.0010	2.66	3785.0000	0.0379 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.8612	326000.0000	0.0025	0.29
Y_R 371.029	0.8865	44970.0000	0.0023	0.26

Sample Name: 440-259111-E-1-B MS

Date: 1/15/2020 9:00:48 PM

Rack:Tube: 3:7

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.5012	ppm	0.0001	0.01	20210.0000	0.5012 (ppm)
Al (396.152 nm)	1.8600	ppm	0.0032	0.17	57320.0000	1.8600 (ppm)
As (188.980 nm)	1.0180	ppm	0.0083	0.82	609.8000	1.0180 (ppm)
B (249.678 nm)	1.7000	ppm	0.0035	0.20	18030.0000	1.7000 (ppm)
Ba (233.527 nm)	1.1480	ppm	0.0060	0.52	98100.0000	1.1480 (ppm)
Be (234.861 nm)	1.0020	ppm	0.0019	0.19	157300.0000	1.0020 (ppm)
Ca (422.673 nm)	126.6000	ppm	0.5790	0.46	493800.0000	126.6000 (ppm)
Cd (214.439 nm)	0.9337	ppm	0.0026	0.27	20150.0000	0.9337 (ppm)
Co (228.615 nm)	0.9359	ppm	0.0001	0.01	12100.0000	0.9359 (ppm)
Cr (205.560 nm)	0.9701	ppm	0.0016	0.16	4307.0000	0.9701 (ppm)
Cu (324.754 nm)	1.0490	ppm	0.0057	0.54	41090.0000	1.0490 (ppm)
Fe (238.204 nm)	6.4930	ppm	0.0159	0.24	16330.0000	6.4930 (ppm)
K (766.491 nm)	47.4600	ppm	0.0967	0.20	48260.0000	47.4600 (ppm)
Li (670.783 nm)	1.1150	ppm	0.0011	0.10	63710.0000	1.1150 (ppm)
Mg (279.078 nm)	36.1600	ppm	0.1996	0.55	97640.0000	36.1600 (ppm)
Mn (259.372 nm)	1.0700	ppm	0.0020	0.18	100200.0000	1.0700 (ppm)
Mo (204.598 nm)	1.0750	ppm	0.0014	0.13	4139.0000	1.0750 (ppm)
Na (589.592 nm)	872.9000 o	ppm	0.1641	0.02	4603000.0000	872.9000 o (ppm)
Ni (231.604 nm)	0.9354	ppm	0.0041	0.44	4089.0000	0.9354 (ppm)
P (213.618 nm)	1.7300	ppm	0.0026	0.15	1247.0000	1.7300 (ppm)
Pb (220.353 nm)	0.9226	ppm	0.0001	0.01	1829.0000	0.9226 (ppm)
Sb (206.834 nm)	1.0530	ppm	0.0014	0.13	922.5000	1.0530 (ppm)
Se (196.026 nm)	1.1840	ppm	0.0049	0.42	726.2000	1.1840 (ppm)
Si (251.611 nm)	8.7270	ppm	0.0496	0.57	18360.0000	8.7270 (ppm)
Sn (189.925 nm)	0.9795	ppm	0.0047	0.48	564.9000	0.9795 (ppm)
Sr (421.552 nm)	5.0790	ppm	0.0154	0.30	1758000.0000	5.0790 (ppm)
Ti (336.122 nm)	1.0260	ppm	0.0033	0.32	102700.0000	1.0260 (ppm)
Tl (190.794 nm)	0.8360	ppm	0.0223	2.67	900.1000	0.8360 (ppm)
V (292.401 nm)	1.0190	ppm	0.0026	0.25	31100.0000	1.0190 (ppm)
W (207.912 nm)	1.0400	ppm	0.0003	0.03	1699.0000	1.0400 (ppm)
Zn (202.548 nm)	1.1880	ppm	0.0026	0.22	18380.0000	1.1880 (ppm)
Zr (343.823 nm)	1.0050	ppm	0.0061	0.61	81980.0000	1.0050 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.8630	326600.0000	0.0009	0.11
Y_R 371.029	0.8905	45170.0000	0.0046	0.52

Sample Name: 440-259111-E-1-C MSD

Date: 1/15/2020 9:04:00 PM

Rack:Tube: 3:8

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.4984	ppm	0.0010	0.20	20100.0000	0.4984 (ppm)
Al (396.152 nm)	1.8080	ppm	0.0035	0.19	55740.0000	1.8080 (ppm)
As (188.980 nm)	1.0160	ppm	0.0024	0.24	608.7000	1.0160 (ppm)
B (249.678 nm)	1.6650	ppm	0.0061	0.37	17670.0000	1.6650 (ppm)
Ba (233.527 nm)	1.1430	ppm	0.0043	0.38	97690.0000	1.1430 (ppm)
Be (234.861 nm)	0.9981	ppm	0.0035	0.35	156700.0000	0.9981 (ppm)
Ca (422.673 nm)	122.9000	ppm	0.3614	0.29	479200.0000	122.9000 (ppm)
Cd (214.439 nm)	0.9316	ppm	0.0030	0.32	20110.0000	0.9316 (ppm)
Co (228.615 nm)	0.9326	ppm	0.0003	0.03	12050.0000	0.9326 (ppm)
Cr (205.560 nm)	0.9642	ppm	0.0021	0.21	4281.0000	0.9642 (ppm)
Cu (324.754 nm)	1.0410	ppm	0.0032	0.31	40760.0000	1.0410 (ppm)
Fe (238.204 nm)	5.9820	ppm	0.0162	0.27	15040.0000	5.9820 (ppm)
K (766.491 nm)	45.8100	ppm	0.0475	0.10	46580.0000	45.8100 (ppm)
Li (670.783 nm)	1.1040	ppm	0.0002	0.02	63080.0000	1.1040 (ppm)
Mg (279.078 nm)	35.0800	ppm	0.1469	0.42	94720.0000	35.0800 (ppm)
Mn (259.372 nm)	1.0610	ppm	0.0034	0.32	99290.0000	1.0610 (ppm)
Mo (204.598 nm)	1.0720	ppm	0.0072	0.67	4128.0000	1.0720 (ppm)
Na (589.592 nm)	839.4000 o	ppm	2.2600	0.27	4427000.0000	839.4000 o (ppm)
Ni (231.604 nm)	0.9361	ppm	0.0020	0.21	4093.0000	0.9361 (ppm)
P (213.618 nm)	1.6960	ppm	0.0097	0.57	1222.0000	1.6960 (ppm)
Pb (220.353 nm)	0.9244	ppm	0.0058	0.63	1833.0000	0.9244 (ppm)
Sb (206.834 nm)	1.0430	ppm	0.0018	0.17	913.7000	1.0430 (ppm)
Se (196.026 nm)	1.1600	ppm	0.0077	0.66	712.0000	1.1600 (ppm)
Si (251.611 nm)	8.5640	ppm	0.0513	0.60	18020.0000	8.5640 (ppm)
Sn (189.925 nm)	0.9876	ppm	0.0075	0.76	569.5000	0.9876 (ppm)
Sr (421.552 nm)	4.8710	ppm	0.0274	0.56	1686000.0000	4.8710 (ppm)
Ti (336.122 nm)	1.0260	ppm	0.0058	0.57	102800.0000	1.0260 (ppm)
Tl (190.794 nm)	0.7866	ppm	0.0313	3.98	845.5000	0.7866 (ppm)
V (292.401 nm)	1.0160	ppm	0.0030	0.30	30990.0000	1.0160 (ppm)
W (207.912 nm)	1.0390	ppm	0.0065	0.63	1697.0000	1.0390 (ppm)
Zn (202.548 nm)	1.1700	ppm	0.0034	0.29	18100.0000	1.1700 (ppm)
Zr (343.823 nm)	1.0070	ppm	0.0041	0.41	82150.0000	1.0070 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.8640	327000.0000	0.0018	0.21
Y_R 371.029	0.8858	44930.0000	0.0028	0.32

Sample Name: CCV 6043773

Date: 1/15/2020 9:07:12 PM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.4795	ppm	0.0012	0.25	19360.0000	0.4795 (ppm)
Al (396.152 nm)	0.9513	ppm	0.0005	0.06	29580.0000	0.9513 (ppm)
As (188.980 nm)	0.9514	ppm	0.0011	0.12	570.4000	0.9514 (ppm)
B (249.678 nm)	0.9503	ppm	0.0003	0.03	10040.0000	0.9503 (ppm)
Ba (233.527 nm)	0.9873	ppm	0.0043	0.43	84400.0000	0.9873 (ppm)
Be (234.861 nm)	0.9611	ppm	0.0006	0.07	150800.0000	0.9611 (ppm)
Ca (422.673 nm)	4.8650	ppm	0.0051	0.10	19050.0000	4.8650 (ppm)
Cd (214.439 nm)	0.9576	ppm	0.0008	0.08	20670.0000	0.9576 (ppm)
Co (228.615 nm)	0.9498	ppm	0.0009	0.10	12270.0000	0.9498 (ppm)
Cr (205.560 nm)	0.9538	ppm	0.0034	0.35	4233.0000	0.9538 (ppm)
Cu (324.754 nm)	0.9586	ppm	0.0001	0.01	37630.0000	0.9586 (ppm)
Fe (238.204 nm)	0.9804	ppm	0.0043	0.44	2418.0000	0.9804 (ppm)
K (766.491 nm)	9.7480	ppm	0.0796	0.82	9817.0000	9.7480 (ppm)
Li (670.783 nm)	0.9782	ppm	0.0032	0.33	55710.0000	0.9782 (ppm)
Mg (279.078 nm)	4.9870	ppm	0.0268	0.54	13470.0000	4.9870 (ppm)
Mn (259.372 nm)	0.9546	ppm	0.0003	0.03	88760.0000	0.9546 (ppm)
Mo (204.598 nm)	0.9571	ppm	0.0058	0.61	3686.0000	0.9571 (ppm)
Na (589.592 nm)	10.3900	ppm	0.0182	0.17	55750.0000	10.3900 (ppm)
Ni (231.604 nm)	0.9511	ppm	0.0020	0.21	4160.0000	0.9511 (ppm)
P (213.618 nm)	0.9730	ppm	0.0072	0.75	687.6000	0.9730 (ppm)
Pb (220.353 nm)	0.9568	ppm	0.0030	0.32	1898.0000	0.9568 (ppm)
Sb (206.834 nm)	0.9582	ppm	0.0088	0.92	840.3000	0.9582 (ppm)
Se (196.026 nm)	0.9554	ppm	0.0032	0.34	588.3000	0.9554 (ppm)
Si (251.611 nm)	4.8070	ppm	0.0426	0.89	10170.0000	4.8070 (ppm)
Sn (189.925 nm)	0.9522	ppm	0.0007	0.08	549.0000	0.9522 (ppm)
Sr (421.552 nm)	0.9640	ppm	0.0006	0.06	333400.0000	0.9640 (ppm)
Ti (336.122 nm)	0.9730	ppm	0.0026	0.27	97530.0000	0.9730 (ppm)
Tl (190.794 nm)	0.9570	ppm	0.0083	0.87	1036.0000	0.9570 (ppm)
V (292.401 nm)	0.9614	ppm	0.0022	0.23	29220.0000	0.9614 (ppm)
W (207.912 nm)	0.9664	ppm	0.0056	0.58	1579.0000	0.9664 (ppm)
Zn (202.548 nm)	0.9595	ppm	0.0013	0.14	14880.0000	0.9595 (ppm)
Zr (343.823 nm)	0.9387	ppm	0.0021	0.22	76740.0000	0.9387 (ppm)

Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
Pb (220.353 nm)	Y 371.029
Sb (206.834 nm)	Y 371.029
Se (196.026 nm)	Y 371.029
Si (251.611 nm)	Y 371.029
Sn (189.925 nm)	Y 371.029
Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9666	365900.0000	0.0004	0.04
Y_R 371.029	0.9441	47880.0000	0.0027	0.29

Sample Name: CCB 6043772

Date: 1/15/2020 9:10:22 PM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

## Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Calculated Concentration
Ag (328.068 nm)	0.0000	ppm	0.0000	36.82	47.0600	0.0000 (ppm)
Al (396.152 nm)	0.0005	ppm	0.0002	32.58	-304.7000	0.0005 (ppm)
As (188.980 nm)	0.0077	ppm	0.0008	10.40	3.3840	0.0077 (ppm)
B (249.678 nm)	0.0017	ppm	0.0002	10.56	4.7270	0.0017 (ppm)
Ba (233.527 nm)	0.0004	ppm	0.0002	58.70	91.0900	0.0004 (ppm)
Be (234.861 nm)	0.0003	ppm	0.0002	50.29	64.0100	0.0003 (ppm)
Ca (422.673 nm)	0.0073	ppm	0.0051	70.18	108.5000	0.0073 (ppm)
Cd (214.439 nm)	0.0003	ppm	0.0002	64.07	0.6334	0.0003 (ppm)
Co (228.615 nm)	-0.0002 u	ppm	0.0000	9.62	-10.7500	-0.0002 u (ppm)
Cr (205.560 nm)	0.0001 u	ppm	0.0010	> 100.00	1.1030	0.0001 u (ppm)
Cu (324.754 nm)	0.0006	ppm	0.0003	48.85	157.6000	0.0006 (ppm)
Fe (238.204 nm)	0.0001 u	ppm	0.0043	> 100.00	-55.4200	0.0001 u (ppm)
K (766.491 nm)	0.0100 u	ppm	0.0283	> 100.00	-115.5000	0.0100 u (ppm)
Li (670.783 nm)	0.0057	ppm	0.0006	9.84	454.7000	0.0057 (ppm)
Mg (279.078 nm)	0.0057	ppm	0.0017	29.68	29.6600	0.0057 (ppm)
Mn (259.372 nm)	0.0004	ppm	0.0000	11.23	81.4800	0.0004 (ppm)
Mo (204.598 nm)	0.0061	ppm	0.0012	19.99	21.6400	0.0061 (ppm)
Na (589.592 nm)	0.1924	ppm	0.0109	5.68	1916.0000	0.1924 (ppm)
Ni (231.604 nm)	0.0008	ppm	0.0004	47.22	-8.4010	0.0008 (ppm)
P (213.618 nm)	0.0010 u	ppm	0.0059	> 100.00	4.7690	0.0010 u (ppm)
Pb (220.353 nm)	0.0014	ppm	0.0010	73.66	11.4100	0.0014 (ppm)
Sb (206.834 nm)	0.0047	ppm	0.0009	18.62	6.6250	0.0047 (ppm)
Se (196.026 nm)	0.0006 u	ppm	0.0053	> 100.00	1.9170	0.0006 u (ppm)
Si (251.611 nm)	0.0028	ppm	0.0005	16.68	5.6720	0.0028 (ppm)
Sn (189.925 nm)	0.0016 u	ppm	0.0031	> 100.00	0.5515	0.0016 u (ppm)
Sr (421.552 nm)	0.0002	ppm	0.0001	45.64	47.1400	0.0002 (ppm)
Ti (336.122 nm)	0.0024	ppm	0.0003	14.17	80.3800	0.0024 (ppm)
Tl (190.794 nm)	0.0000 u	ppm	0.0005	> 100.00	5.4540	0.0000 u (ppm)
V (292.401 nm)	0.0004	ppm	0.0003	74.55	87.5900	0.0004 (ppm)
W (207.912 nm)	0.0070	ppm	0.0042	59.31	5.6160	0.0070 (ppm)
Zn (202.548 nm)	0.0005	ppm	0.0001	9.61	17.1900	0.0005 (ppm)
Zr (343.823 nm)	0.0006	ppm	0.0000	6.84	862.3000	0.0006 (ppm)

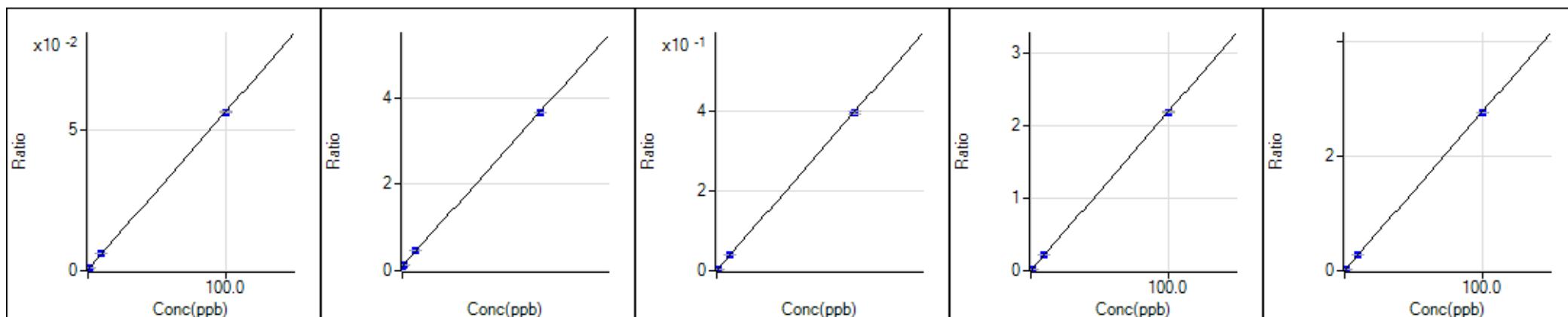
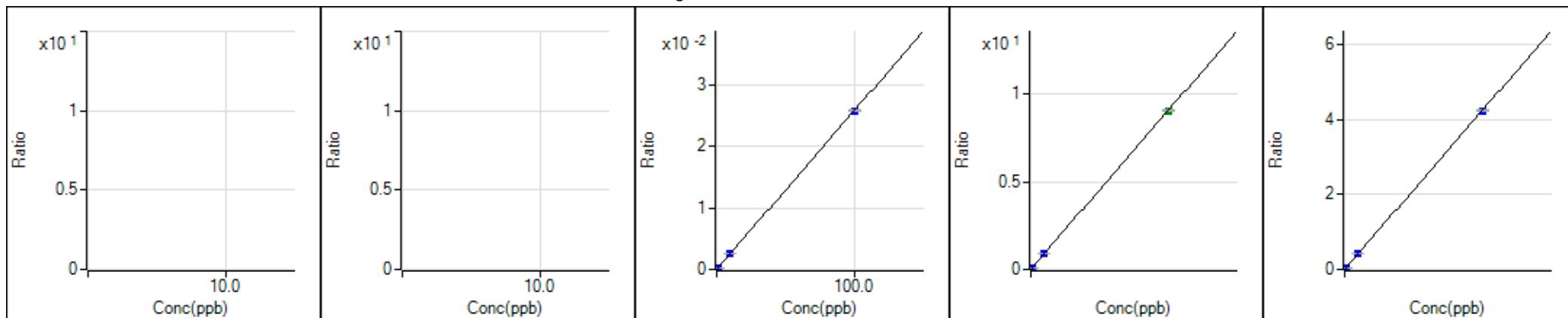
Label	Internal Standard
Ag (328.068 nm)	Y 371.029
Al (396.152 nm)	Y 371.029
As (188.980 nm)	Y 371.029
B (249.678 nm)	Y 371.029

Label	Internal Standard
Ba (233.527 nm)	Y_R 371.029
Be (234.861 nm)	Y 371.029
Ca (422.673 nm)	Y_R 371.029
Cd (214.439 nm)	Y 371.029
Co (228.615 nm)	Y 371.029
Cr (205.560 nm)	Y 371.029
Cu (324.754 nm)	Y 371.029
Fe (238.204 nm)	Y_R 371.029
K (766.491 nm)	Y_R 371.029
Li (670.783 nm)	Y_R 371.029
Mg (279.078 nm)	Y_R 371.029
Mn (259.372 nm)	Y 371.029
Mo (204.598 nm)	Y 371.029
Na (589.592 nm)	Y_R 371.029
Ni (231.604 nm)	Y 371.029
P (213.618 nm)	Y 371.029
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Sr (421.552 nm)	Y_R 371.029
Ti (336.122 nm)	Y 371.029
Tl (190.794 nm)	Y 371.029
V (292.401 nm)	Y 371.029
W (207.912 nm)	Y 371.029
Zn (202.548 nm)	Y 371.029
Zr (343.823 nm)	Y 371.029

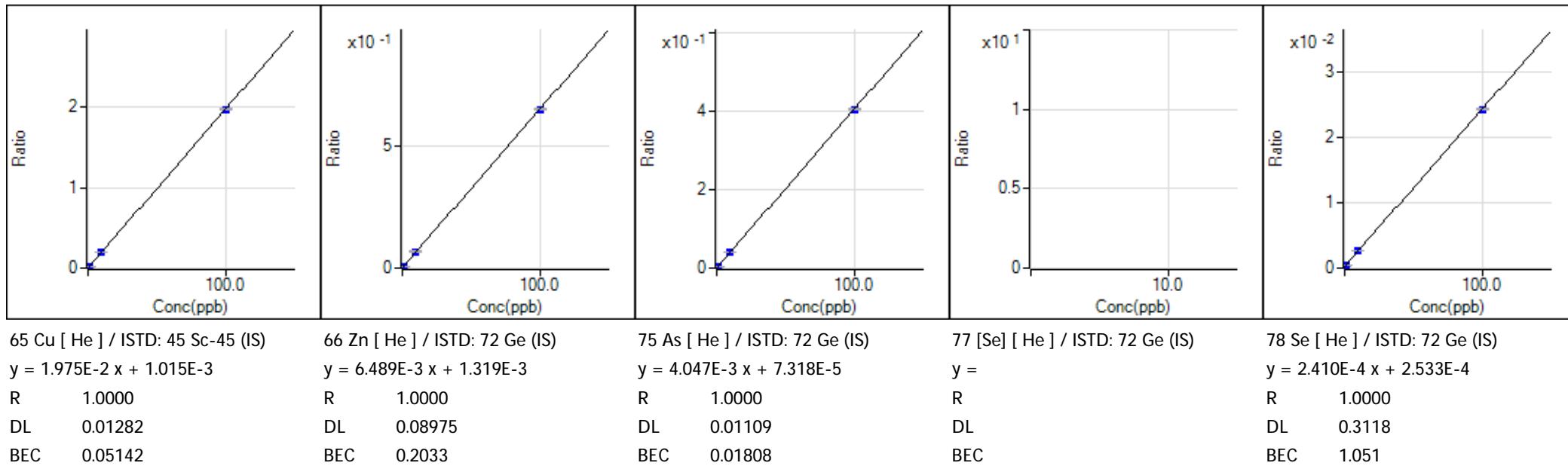
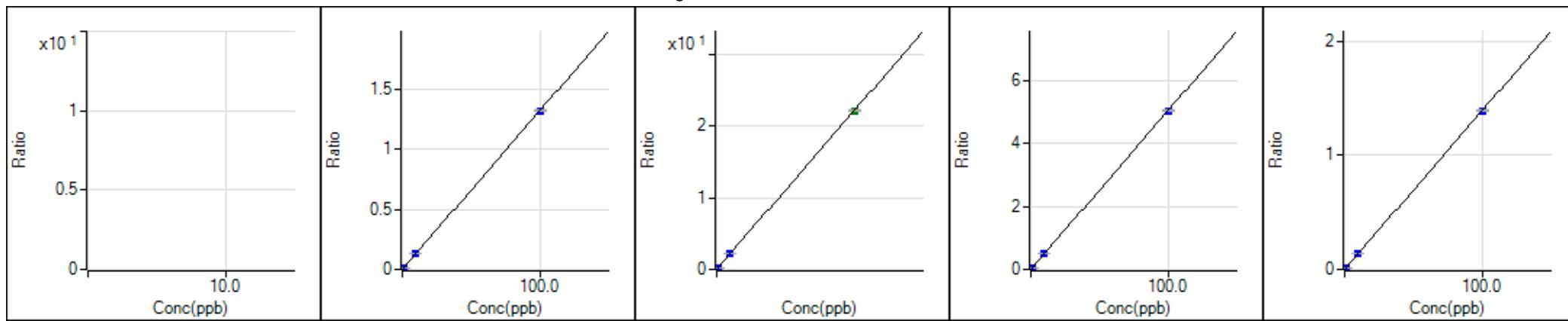
## Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 371.029	0.9803	371000.0000	0.0011	0.12
Y_R 371.029	0.9503	48200.0000	0.0004	0.04

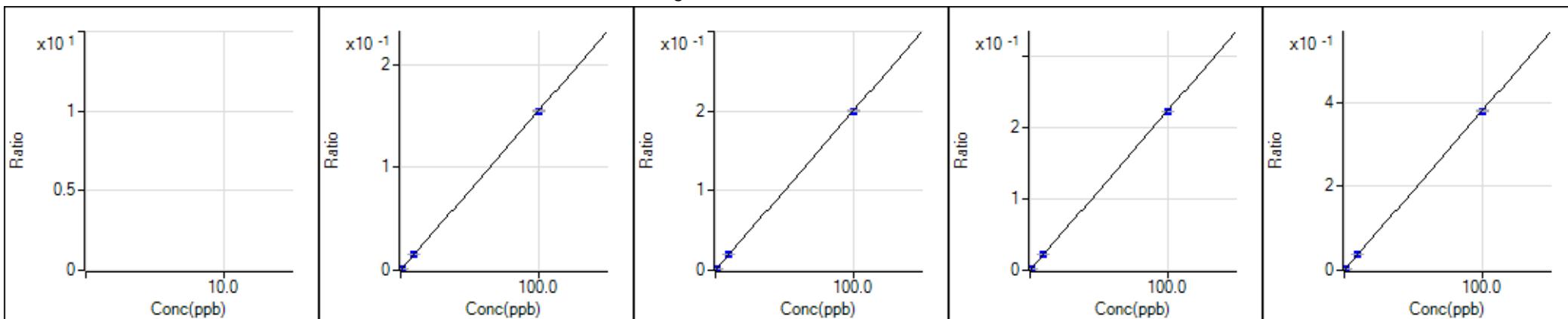
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Calibration for D:\Agilent\ICPMH\1\DATA\200114-2LL.b\023\_CCB.d



Calibration for D:\Agilent\ICPMH\1\DATA\200114-2LL.b\023\_CCB.d



83 [Se] [ He ] / ISTD: 72 Ge (IS)

$$y =$$

R

DL

BEC

85 Rb [ He ] / ISTD: 115 In-115 (IS)

$$y = 1.549E-3 x + 7.047E-6$$

R 1.0000

DL 0.006788

BEC 0.00455

88 Sr [ He ] / ISTD: 115 In-115 (IS)

$$y = 2.000E-3 x + 3.820E-5$$

R 1.0000

DL 0.02705

BEC 0.0191

95 Mo [ He ] / ISTD: 115 In-115 (IS)

$$y = 2.233E-3 x + 1.643E-5$$

R 1.0000

DL 0.01206

BEC 0.007358

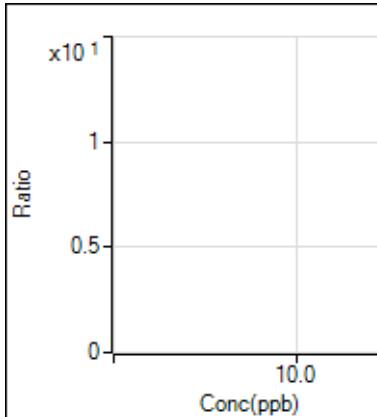
98 [Mo] [ He ] / ISTD: 115 In-115 (IS)

$$y = 3.789E-3 x + 3.054E-5$$

R 1.0000

DL 0.005549

BEC 0.00806



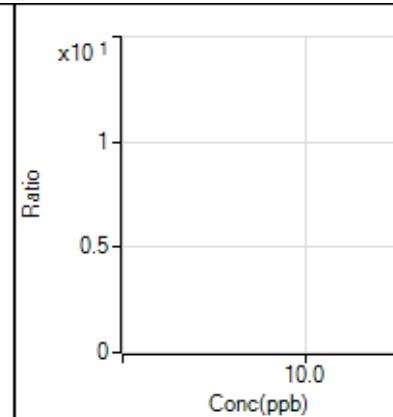
99 [Mo] [ He ] / ISTD: 115 In-115 (IS)

$$y =$$

R

DL

BEC



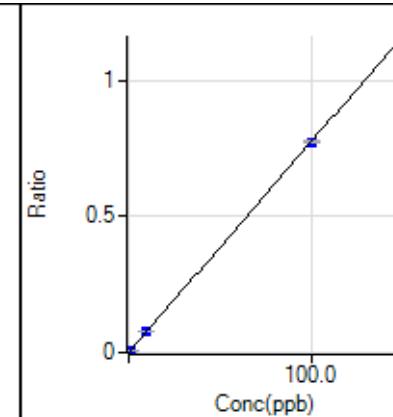
106 [Cd] [ He ] / ISTD: 115 In-115 (IS)

$$y =$$

R

DL

BEC



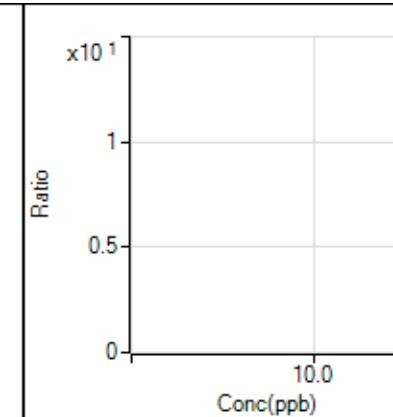
107 Ag [ He ] / ISTD: 115 In-115 (IS)

$$y = 7.730E-3 x + 2.820E-5$$

R 1.0000

DL 0.002368

BEC 0.003649



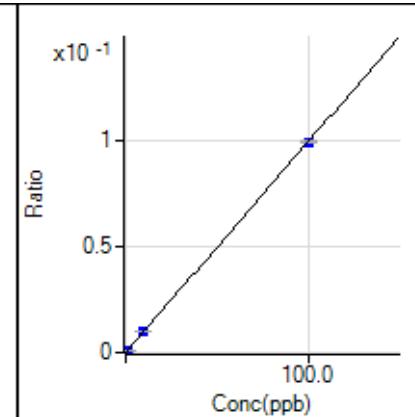
108 [Cd] [ He ] / ISTD: 115 In-115 (IS)

$$y =$$

R

DL

BEC



111 Cd [ He ] / ISTD: 115 In-115 (IS)

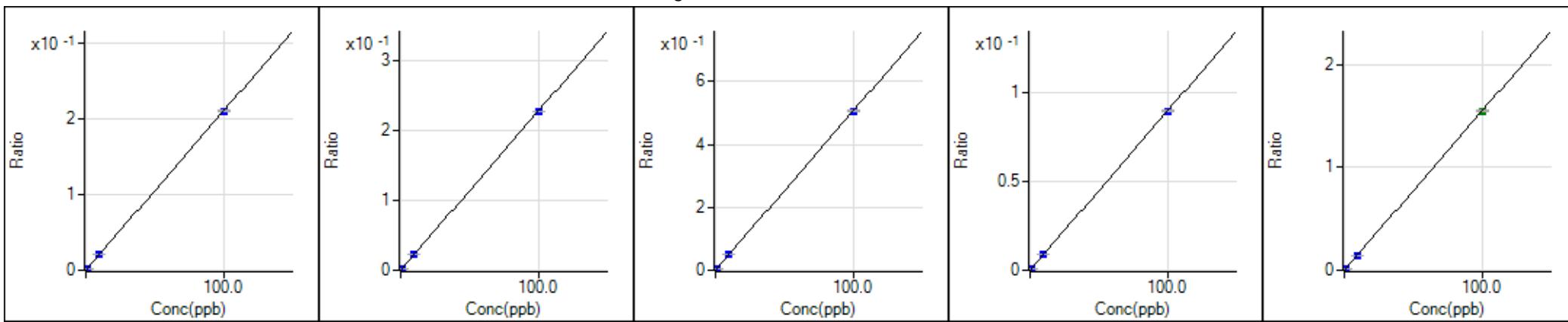
$$y = 9.942E-4 x + 3.881E-6$$

R 1.0000

DL 0.007231

BEC 0.003904

Calibration for D:\Agilent\ICPMH\1\DATA\200114-2LL.b\023\_CCB.d



118 Sn [ He ] / ISTD: 115 In-115 (IS)

$$y = 2.097E-3 x + 1.070E-4$$

R 1.0000

DL 0.01309

BEC 0.05101

121 Sb [ He ] / ISTD: 115 In-115 (IS)

$$y = 2.280E-3 x + 7.874E-5$$

R 1.0000

DL 0.02082

BEC 0.03454

133 Cs [ He ] / ISTD: 115 In-115 (IS)

$$y = 5.063E-3 x + 8.830E-6$$

R 1.0000

DL 0.003782

BEC 0.001744

137 Ba [ He ] / ISTD: 115 In-115 (IS)

$$y = 8.976E-4 x + 1.882E-5$$

R 1.0000

DL 0.02473

BEC 0.02097

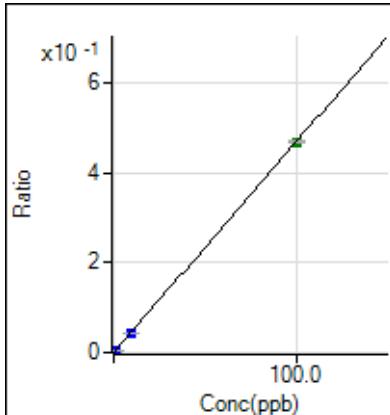
140 Ce [ He ] / ISTD: 115 In-115 (IS)

$$y = 1.549E-2 x + 2.293E-5$$

R 1.0000

DL 0.001199

BEC 0.001481



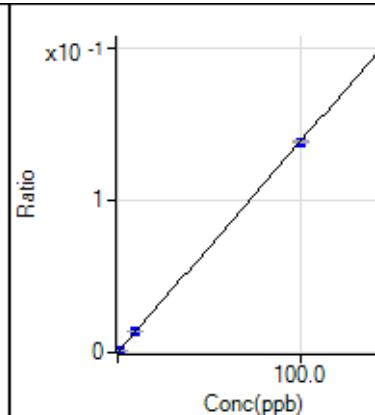
205 Ti [ He ] / ISTD: 159 Tb-159 (IS)

$$y = 4.698E-3 x + 1.028E-5$$

R 1.0000

DL 0.0005446

BEC 0.002188



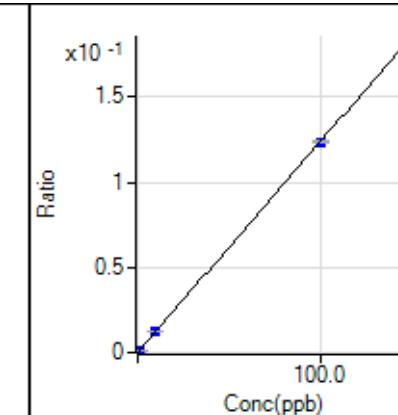
206 [Pb] [ He ] / ISTD: 159 Tb-159 (IS)

$$y = 1.386E-3 x + 7.018E-5$$

R 1.0000

DL 0.01367

BEC 0.05063



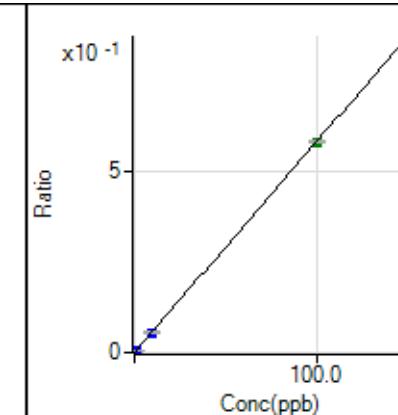
207 [Pb] [ He ] / ISTD: 159 Tb-159 (IS)

$$y = 1.235E-3 x + 5.335E-5$$

R 1.0000

DL 0.01814

BEC 0.0432



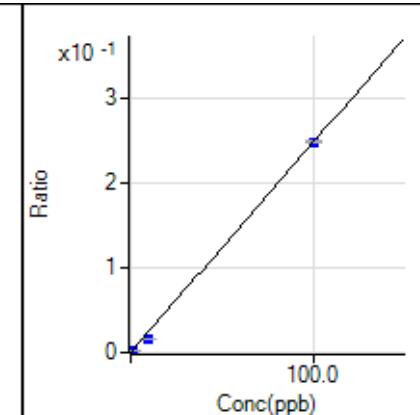
208 Pb [ He ] / ISTD: 159 Tb-159 (IS)

$$y = 5.806E-3 x + 2.547E-4$$

R 1.0000

DL 0.0113

BEC 0.04387



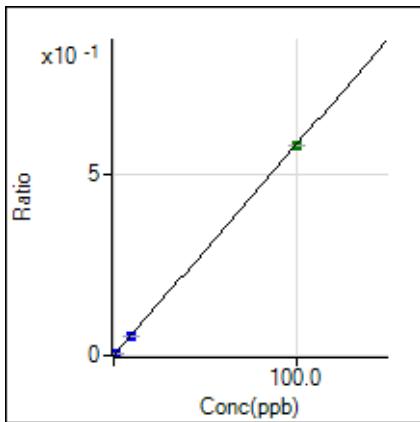
232 Th [ He ] / ISTD: 159 Tb-159 (IS)

$$y = 2.482E-3 x + 2.250E-5$$

R 0.9993

DL 0.0004095

BEC 0.009069



238 U [ He ] / ISTD: 159 Tb-159 (IS)

$$y = 5.804E-3 x + 3.187E-6$$

R 1.0000

DL 0.0008223

BEC 0.000549

Tune Mode	Mass	Name	ISTD	R	a	b (blank)	DL	BEC	Units
He	6	Li	45 Sc-45 (IS) [ He ]						ppb
He	7	Li	45 Sc-45 (IS) [ He ]						ppb
He	9	Be	45 Sc-45 (IS) [ He ]	0.999995504	0.000257275	3.00E-06	0.040190324	0.011671176	ppb
He	23	Na	45 Sc-45 (IS) [ He ]	0.999990408	0.003606305	0.025044061	0.401083607	6.944520975	ppb
He	24	Mg	45 Sc-45 (IS) [ He ]	0.99999981	0.001695158	0.000845001	0.155731221	0.498478976	ppb
He	27	Al	45 Sc-45 (IS) [ He ]	0.999988094	0.000562414	0.000431988	0.309162102	0.768096713	ppb
He	39	K	45 Sc-45 (IS) [ He ]	0.99999892	0.001424413	0.103852004	5.429432548	72.9086445	ppb
He	44	Ca	45 Sc-45 (IS) [ He ]	0.99999942	7.95E-05	0.000485114	2.371258886	6.100163925	ppb
He	51	V	45 Sc-45 (IS) [ He ]	0.99999979	0.021843186	0.000810021	0.009997387	0.037083486	ppb
He	52	Cr	45 Sc-45 (IS) [ He ]	0.999999781	0.027684293	0.003791263	0.025596788	0.136946361	ppb
He	53	[V]	45 Sc-45 (IS) [ He ]						ppb
He	55	Mn	45 Sc-45 (IS) [ He ]	0.999999834	0.013192454	0.000699964	0.01887886	0.053057934	ppb
He	56	Fe	45 Sc-45 (IS) [ He ]	0.999999988	0.02209659	0.033974042	0.333151695	1.537524226	ppb
He	59	Co	45 Sc-45 (IS) [ He ]	0.999999991	0.050405453	0.000154979	0.001334317	0.003074648	ppb
He	60	Ni	45 Sc-45 (IS) [ He ]	0.999999811	0.013917528	0.00034524	0.017324976	0.024806115	ppb
He	65	Cu	45 Sc-45 (IS) [ He ]	0.999999899	0.019746413	0.001015305	0.012817703	0.051417196	ppb
He	66	Zn	72 Ge (IS) [ He ]	0.999996191	0.006488675	0.001319058	0.089751123	0.203286124	ppb
He	75	As	72 Ge (IS) [ He ]	0.999999817	0.004047236	7.32E-05	0.011088527	0.018082552	ppb
He	77	[Se]	72 Ge (IS) [ He ]						ppb
He	78	Se	72 Ge (IS) [ He ]	0.99999471	0.000240988	0.000253266	0.311800505	1.050950643	ppb
He	83	[Se]	72 Ge (IS) [ He ]						ppb
He	85	Rb	115 In-115 (IS) [ He ]	0.999999983	0.001548765	7.05E-06	0.00678767	0.004549797	ppb
He	88	Sr	115 In-115 (IS) [ He ]	0.999999965	0.0019997	3.82E-05	0.027053454	0.019102328	ppb
He	95	Mo	115 In-115 (IS) [ He ]	0.999999917	0.002233361	1.64E-05	0.012057245	0.007357833	ppb
He	98	[Mo]	115 In-115 (IS) [ He ]	0.999998192	0.003789075	3.05E-05	0.00554946	0.008060004	ppb
He	99	[Mo]	115 In-115 (IS) [ He ]						ppb
He	106	[Cd]	115 In-115 (IS) [ He ]						ppb
He	107	Ag	115 In-115 (IS) [ He ]	0.999999857	0.00772973	2.82E-05	0.002367794	0.003648846	ppb
He	108	[Cd]	115 In-115 (IS) [ He ]						ppb
He	111	Cd	115 In-115 (IS) [ He ]	0.999998493	0.000994233	3.88E-06	0.007231234	0.003903644	ppb
He	118	Sn	115 In-115 (IS) [ He ]	0.999998121	0.002096525	0.000106954	0.013094301	0.051014868	ppb
He	121	Sb	115 In-115 (IS) [ He ]	0.999999716	0.002279553	7.87E-05	0.020816585	0.034542957	ppb
He	133	Cs	115 In-115 (IS) [ He ]	0.999999888	0.005062983	8.83E-06	0.003781846	0.001743953	ppb
He	137	Ba	115 In-115 (IS) [ He ]	0.999997818	0.000897593	1.88E-05	0.024727097	0.02096939	ppb
He	140	Ce	115 In-115 (IS) [ He ]	0.999977371	0.015485551	2.29E-05	0.001198539	0.001480814	ppb
He	205	Tl	159 Tb-159 (IS) [ He ]	0.999964751	0.004697831	1.03E-05	0.000544639	0.00218812	ppb
He	206	[Pb]	159 Tb-159 (IS) [ He ]	0.999999391	0.001386286	7.02E-05	0.013673202	0.050626233	ppb
He	207	[Pb]	159 Tb-159 (IS) [ He ]	0.999999675	0.001234949	5.33E-05	0.018144614	0.043196393	ppb
He	208	Pb	159 Tb-159 (IS) [ He ]	0.999990548	0.005806047	0.000254692	0.011295858	0.043866659	ppb
He	232	Th	159 Tb-159 (IS) [ He ]	0.999317079	0.002481632	2.25E-05	0.000409543	0.009068599	ppb
He	238	U	159 Tb-159 (IS) [ He ]	0.999962657	0.005804478	3.19E-06	0.000822349	0.000549023	ppb
He	45	Sc-45 (IS)							ug/l
He	72	Ge (IS)							ug/l
He	115	In-115 (IS)							ug/l
He	159	Tb-159 (IS)							ug/l

# Sample Report

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**Sample Name** RINSE  
**File Name** 001SMPL.d  
**Data Path Name** D:\Agilent\CPMH\1\DATA\200114-2LL.b  
**Acq Time** 2020-01-14 14:44:19  
**Sample Type** Sample  
**Total Dilution** 1.0000  
**Comment** —  
**Location** 1

**QC Analyte Table**

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag

**QC ISTD Table**

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag

# Sample Report

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**Sample Name** RINSE  
**File Name** 002SMPL.d  
**Data Path Name** D:\Agilent\CPMH\1\DATA\200114-2LL.b  
**Acq Time** 2020-01-14 14:46:23  
**Sample Type** Sample  
**Total Dilution** 1.0000  
**Comment** —  
**Location** 1

**QC Analyte Table**

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag

**QC ISTD Table**

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag

# Calibration Blank Report

Sample Name	STD0-6043371
File Name	003CALB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 14:48:27
Sample Type	CalBlk
Total Dilution	1.0000
Comment	—
Location	1101

## QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Be	9	45	He	0.67	114.6
Na	23	45	He	5564.36	2.0
Mg	24	45	He	187.78	10.7
Al	27	45	He	96.00	13.7
K	39	45	He	23072.91	2.2
Ca	44	45	He	107.78	12.9
V	51	45	He	180.00	9.3
Cr	52	45	He	842.25	6.0
Mn	55	45	He	155.56	12.2
Fe	56	45	He	7549.59	7.6
Co	59	45	He	34.44	14.8
Ni	60	45	He	76.67	23.0
Cu	65	45	He	225.56	8.1
Zn	66	72	He	234.45	15.2
As	75	72	He	13.00	20.4
Se	78	72	He	45.00	10.2
Rb	85	115	He	13.33	50.0
Sr	88	115	He	72.22	47.1
Mo	95	115	He	31.11	55.0
Ag	107	115	He	53.33	21.7
Cd	111	115	He	7.33	61.5
Sn	118	115	He	202.23	8.5
Sb	121	115	He	148.89	20.1
Cs	133	115	He	16.67	72.1
Ba	137	115	He	35.56	39.0
Ce	140	115	He	43.34	26.6
Tl	205	159	He	64.44	7.9
Pb	208	159	He	1596.72	8.2
Th	232	159	He	141.11	1.4
U	238	159	He	20.00	50.0

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD
Sc-45 (IS)	45	He	222181.13	0.3
Ge (IS)	72	He	177648.10	0.7
In-115 (IS)	115	He	1890884.26	0.4
Tb-159 (IS)	159	He	6270485.31	0.6

# Calibration Standard Report

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Sample Name	STD1-6043370
File Name	004CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 14:50:30
Sample Type	CalStd
Total Dilution	1.0000
Comment	--
ISTD Ref FileName	003CALB.d
Location	1102

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Be	9	45	He	12.33	10.2
Na	23	45	He	9639.69	3.6
Mg	24	45	He	2125.71	4.9
Al	27	45	He	118.67	15.1
K	39	45	He	24597.45	0.8
Ca	44	45	He	265.56	8.1
V	51	45	He	1214.50	2.8
Cr	52	45	He	2214.62	5.2
Mn	55	45	He	773.36	4.4
Fe	56	45	He	17137.09	2.2
Co	59	45	He	2312.41	7.0
Ni	60	45	He	692.24	3.5
Cu	65	45	He	1088.94	9.2
Zn	66	72	He	516.68	7.8
As	75	72	He	171.00	4.1
Se	78	72	He	63.33	14.7
Rb	85	115	He	654.46	0.3
Sr	88	115	He	821.14	0.5
Mo	95	115	He	863.36	3.2
Ag	107	115	He	2993.65	1.0
Cd	111	115	He	385.34	1.3
Sn	118	115	He	978.93	2.5
Sb	121	115	He	988.93	9.2
Cs	133	115	He	1889.02	3.4
Ba	137	115	He	354.45	2.2
Ce	140	115	He	5499.97	0.6
Tl	205	159	He	5496.68	1.7
[Pb]	206	159	He	2102.40	4.3
Pb	208	159	He	8298.81	3.4
Th	232	159	He	443.34	1.5
U	238	159	He	6861.85	1.0

# Calibration Standard Report

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QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	221218.83	0.7	222181.13	99.57	60	120	
Ge (IS)	72	He	177141.14	1.0	177648.1	99.71	60	120	
In-115 (IS)	115	He	1885532.59	0.6	1890884.26	99.72	60	120	
Tb-159 (IS)	159	He	6291874.06	0.2	6270485.31	100.34	60	120	



# Calibration Standard Report

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Sample Name	STD2-6043369
File Name	005CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 14:52:34
Sample Type	CalStd
Total Dilution	1.0000
Comment	--
ISTD Ref FileName	003CALB.d
Location	1103

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Be	9	45	He	55.17	13.6
Na	23	45	He	25086.90	1.1
Mg	24	45	He	9655.25	0.6
Al	27	45	He	232.67	8.3
K	39	45	He	30697.24	1.4
Ca	44	45	He	1002.26	4.5
V	51	45	He	5104.21	0.6
Cr	52	45	He	7047.21	1.7
Mn	55	45	He	3153.67	0.8
Fe	56	45	He	55998.86	2.3
Co	59	45	He	11225.29	1.3
Ni	60	45	He	3158.13	1.6
Cu	65	45	He	4597.39	1.2
Zn	66	72	He	1435.63	3.2
As	75	72	He	728.02	2.9
Se	78	72	He	84.33	4.5
Rb	85	115	He	2936.97	5.1
Sr	88	115	He	3856.08	2.4
Mo	95	115	He	4192.84	0.8
Ag	107	115	He	14608.43	0.8
Cd	111	115	He	1898.79	3.7
Sn	118	115	He	4145.05	0.5
Sb	121	115	He	4455.15	2.9
Cs	133	115	He	9596.56	1.4
Ba	137	115	He	1694.55	8.1
Ce	140	115	He	27406.14	1.1
Tl	205	159	He	27249.17	1.2
[Pb]	206	159	He	9090.83	2.3
Pb	208	159	He	36373.44	1.5
Th	232	159	He	7325.35	3.6
U	238	159	He	33525.31	2.6

# Calibration Standard Report

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QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	220598.55	0.7	222181.13	99.29	60	120	
Ge (IS)	72	He	177699.84	0.4	177648.1	100.03	60	120	
In-115 (IS)	115	He	1884590.20	0.5	1890884.26	99.67	60	120	
Tb-159 (IS)	159	He	6287356.14	0.5	6270485.31	100.27	60	120	



# Calibration Standard Report

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Sample Name	STD3-6043368
File Name	006CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 14:54:37
Sample Type	CalStd
Total Dilution	1.0000
Comment	--
ISTD Ref FileName	003CALB.d
Location	1104

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Be	9	45	He	560.68	2.2
Na	23	45	He	199216.20	0.6
Mg	24	45	He	95923.49	0.3
Al	27	45	He	1421.40	3.5
K	39	45	He	104369.96	0.2
Ca	44	45	He	9040.49	2.0
V	51	45	He	49299.24	0.5
Cr	52	45	He	63443.46	0.5
Mn	55	45	He	29652.15	1.0
Fe	56	45	He	502697.43	1.2
Co	59	45	He	113328.49	0.6
Ni	60	45	He	31503.75	1.6
Cu	65	45	He	44353.70	0.9
Zn	66	72	He	12200.51	2.4
As	75	72	He	7306.11	0.7
Se	78	72	He	471.01	3.7
Rb	85	115	He	29800.89	1.8
Sr	88	115	He	38587.69	0.7
Mo	95	115	He	43081.42	1.3
Ag	107	115	He	147763.12	1.0
Cd	111	115	He	18787.67	0.3
Sn	118	115	He	39707.24	0.8
Sb	121	115	He	43614.03	1.1
Cs	133	115	He	96826.99	0.7
Ba	137	115	He	16911.09	2.9
Ce	140	115	He	277269.45	0.2
Tl	205	159	He	274652.77	0.3
[Pb]	206	159	He	88005.24	0.7
Pb	208	159	He	356064.48	0.4
Th	232	159	He	97598.46	1.1
U	238	159	He	338401.71	0.8

# Calibration Standard Report

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QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	224432.46	0.1	222181.13	101.01	60	120	
Ge (IS)	72	He	179130.20	0.3	177648.1	100.83	60	120	
In-115 (IS)	115	He	1920921.27	0.2	1890884.26	101.59	60	120	
Tb-159 (IS)	159	He	6388132.38	0.7	6270485.31	101.88	60	120	



# Calibration Standard Report

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Sample Name	STD4-6043367
File Name	007CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 14:56:41
Sample Type	CalStd
Total Dilution	1.0000
Comment	--
ISTD Ref FileName	003CALB.d
Location	1105

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Be	9	45	He	5683.53	1.6
Na	23	45	He	1997199.16	1.0
Mg	24	45	He	935905.73	0.8
Al	27	45	He	12507.71	0.7
K	39	45	He	809134.80	0.6
Ca	44	45	He	87905.76	1.7
V	51	45	He	482493.23	0.9
Cr	52	45	He	612085.67	0.4
Mn	55	45	He	291463.45	0.4
Fe	56	45	He	4886808.97	1.1
Co	59	45	He	1113024.54	0.9
Ni	60	45	He	307369.66	0.7
Cu	65	45	He	436263.78	1.0
Zn	66	72	He	115893.21	0.3
As	75	72	He	72171.51	0.5
Se	78	72	He	4342.63	1.4
Rb	85	115	He	293841.77	0.2
Sr	88	115	He	379455.91	0.6
Mo	95	115	He	423748.36	0.9
Ag	107	115	He	1466611.71	0.1
Cd	111	115	He	188666.37	0.3
Sn	118	115	He	398039.63	0.5
Sb	121	115	He	432678.59	0.9
Cs	133	115	He	960605.62	0.3
Ba	137	115	He	170365.15	0.3
Ce	140	115	He	2940055.65	0.6
Tl	205	159	He	3014373.49	0.5
[Pb]	206	159	He	889259.10	0.6
Pb	208	159	He	3725462.93	0.3
Th	232	159	He	1597259.73	0.4
U	238	159	He	3724492.34	0.5

# Calibration Standard Report

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QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	220810.96	0.6	222181.13	99.38	60	120	
Ge (IS)	72	He	178305.07	0.9	177648.1	100.37	60	120	
In-115 (IS)	115	He	1897283.72	0.9	1890884.26	100.34	60	120	
Tb-159 (IS)	159	He	6410954.88	0.7	6270485.31	102.24	60	120	



# Initial Calibration Verification (ICV) Report

Sample Name	ICV-6043366
File Name	008_ICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 14:58:45
Sample Type	ICV
Total Dilution	1.0000
Comment	—
Location	1106

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Be	9	45	He	24.300	ppb	1.6	1386.56	25	97.2	90	110	
Al	27	45	He	25.490	ppb	1.0	3273.69	25	101.96	90	110	
V	51	45	He	24.896	ppb	0.6	120730.32	25	99.58	90	110	
Cr	52	45	He	24.893	ppb	0.5	153610.69	25	99.57	90	110	
Mn	55	45	He	25.075	ppb	1.1	73486.39	25	100.3	90	110	
Fe	56	45	He	246.346	ppb	1.1	1214221.44	250	98.54	90	110	
Co	59	45	He	25.064	ppb	0.8	280099.48	25	100.26	90	110	
Ni	60	45	He	25.083	ppb	0.9	77464.40	25	100.33	90	110	
Cu	65	45	He	24.735	ppb	0.0	108496.38	25	98.94	90	110	
Zn	66	72	He	24.803	ppb	0.8	28978.87	25	99.21	90	110	
As	75	72	He	25.028	ppb	0.7	18103.88	25	100.11	90	110	
Se	78	72	He	24.698	ppb	4.0	1108.38	25	98.79	90	110	
Rb	85	115	He	24.924	ppb	0.2	73304.75	25	99.7	90	110	
Sr	88	115	He	25.063	ppb	0.8	95232.68	25	100.25	90	110	
Mo	95	115	He	25.140	ppb	0.3	106637.97	25	100.56	90	110	
Ag	107	115	He	25.436	ppb	0.9	373343.00	25	101.74	90	110	
Cd	111	115	He	25.111	ppb	0.4	47409.27	25	100.44	90	110	
Sn	118	115	He	24.829	ppb	0.5	99040.92	25	99.32	90	110	
Sb	121	115	He	25.160	ppb	1.2	109048.15	25	100.64	90	110	
Cs	133	115	He	25.104	ppb	0.6	241334.27	25	100.42	90	110	
Ba	137	115	He	25.134	ppb	0.7	42870.35	25	100.54	90	110	
Ce	140	115	He	24.120	ppb	0.2	709212.33	25	96.48	90	110	
Tl	205	159	He	23.382	ppb	0.3	697926.53	25	93.53	90	110	
Pb	208	159	He	24.410	ppb	0.5	901986.83	25	97.64	90	110	
Th	232	159	He	28.902	ppb	0.3	455814.11	25	115.61	90	110	> +/- 10%
U	238	159	He	23.682	ppb	0.4	873334.78	25	94.73	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	221677.18	0.1	222181.13	99.77	60	120	
Ge (IS)	72	He	178603.55	0.5	177648.1	100.54	60	120	
In-115 (IS)	115	He	1898668.53	0.6	1890884.26	100.41	60	120	
Tb-159 (IS)	159	He	6353110.16	0.4	6270485.31	101.32	60	120	

# Initial Calibration Blank (ICB) Report

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Sample Name	ICB-6043371
File Name	009_ICB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 15:00:48
Sample Type	ICB
Total Dilution	1.0000
Comment	—
Location	1101

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Be	9	45	He	0.072	ppb	37.5	4.67	0.5	
Al	27	45	He	-0.043	ppb	N/A	88.67	10	
V	51	45	He	0.080	ppb	14.3	553.37	1	
Cr	52	45	He	0.078	ppb	47.9	1292.32	1	
Mn	55	45	He	0.076	ppb	30.2	370.01	1	
Fe	56	45	He	0.784	ppb	49.5	11140.93	20	
Co	59	45	He	0.081	ppb	2.9	916.79	1	
Ni	60	45	He	0.084	ppb	22.8	327.80	1	
Cu	65	45	He	0.088	ppb	21.5	597.82	1	
Zn	66	72	He	0.104	ppb	32.4	351.12	20	
As	75	72	He	0.105	ppb	37.6	87.67	1	
Se	78	72	He	0.168	ppb	34.6	51.67	1	
Rb	85	115	He	0.104	ppb	30.9	313.35	1	
Sr	88	115	He	0.097	ppb	45.5	432.25	1	
Mo	95	115	He	0.135	ppb	26.7	592.26	1	
Ag	107	115	He	0.108	ppb	40.9	1619.24	1	
Cd	111	115	He	0.095	ppb	38.4	183.01	1	
Sn	118	115	He	0.096	ppb	45.1	574.47	10	
Sb	121	115	He	0.352	ppb	5.6	1644.57	1	
Cs	133	115	He	0.080	ppb	32.7	771.21	1	
Ba	137	115	He	0.081	ppb	21.9	171.11	1	
Ce	140	115	He	0.078	ppb	38.9	2309.90	1	
Tl	205	159	He	0.077	ppb	38.3	2330.79	1	
Pb	208	159	He	0.061	ppb	46.0	3818.44	1	
Th	232	159	He	0.129	ppb	3.4	2160.37	1	
U	238	159	He	0.063	ppb	9.3	2320.93	1	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	217260.50	0.6	222181.13	97.79	60	120	
Ge (IS)	72	He	175937.50	1.0	177648.1	99.04	60	120	
In-115 (IS)	115	He	1865054.62	0.8	1890884.26	98.63	60	120	
Tb-159 (IS)	159	He	6286840.44	0.4	6270485.31	100.26	60	120	

# Initial Calibration Blank (ICB) Report

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**Sample Name** ICB-6043371  
**File Name** 010\_ICB.d  
**Data Path Name** D:\Agilent\ICPMH\1\DATA\200114-2LL.b  
**Acq Time** 2020-01-14 15:02:52  
**Sample Type** ICB  
**Total Dilution** 1.0000  
**Comment** —  
**Location** 1101

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Be	9	45	He	0.033	ppb	27.0	2.50	0.5	
Al	27	45	He	-0.097	ppb	N/A	82.00	10	
V	51	45	He	0.026	ppb	9.1	297.79	1	
Cr	52	45	He	0.036	ppb	16.8	1037.82	1	
Mn	55	45	He	0.025	ppb	34.7	222.23	1	
Fe	56	45	He	0.140	ppb	90.3	8051.62	20	
Co	59	45	He	0.024	ppb	35.4	293.35	1	
Ni	60	45	He	0.025	ppb	40.2	150.00	1	
Cu	65	45	He	0.026	ppb	15.6	332.23	1	
Zn	66	72	He	0.028	ppb	26.3	262.23	20	
As	75	72	He	0.017	ppb	99.1	25.00	1	
Se	78	72	He	-0.004	ppb	N/A	44.00	1	
Rb	85	115	He	0.024	ppb	24.8	82.22	1	
Sr	88	115	He	0.017	ppb	71.4	134.45	1	
Mo	95	115	He	0.042	ppb	7.0	207.78	1	
Ag	107	115	He	0.032	ppb	14.4	516.69	1	
Cd	111	115	He	0.028	ppb	28.3	58.67	1	
Sn	118	115	He	0.040	ppb	29.2	356.68	10	
Sb	121	115	He	0.130	ppb	9.7	702.25	1	
Cs	133	115	He	0.028	ppb	15.0	280.01	1	
Ba	137	115	He	0.019	ppb	55.7	67.78	1	
Ce	140	115	He	0.023	ppb	23.3	701.19	1	
Tl	205	159	He	0.022	ppb	17.7	723.39	1	
Pb	208	159	He	0.006	ppb	61.2	1808.99	1	
Th	232	159	He	0.046	ppb	3.8	857.83	1	
U	238	159	He	0.020	ppb	17.7	736.76	1	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	217177.12	0.1	222181.13	97.75	60	120	
Ge (IS)	72	He	174407.37	0.4	177648.1	98.18	60	120	
In-115 (IS)	115	He	1872730.26	0.8	1890884.26	99.04	60	120	
Tb-159 (IS)	159	He	6300791.97	0.2	6270485.31	100.48	60	120	

## Reporting Limit Check (CRI 0.2)

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**Sample Name** CRI-6043378  
**File Name** 011RL02.d  
**Data Path Name** D:\Agilent\ICPMH\1\DATA\200114-2LL.b  
**Acq Time** 2020-01-14 15:04:56  
**Sample Type** RL\_02  
**Total Dilution** 1.0000  
**Comment** —  
**Location** 1102

### QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	%Rec	%Low	%High	QC Flag
Be	9	45	He	0.188	ppb	31.8	11.17	0.2	94	50	150	
V	51	45	He	0.198	ppb	6.3	1111.16	0.2	99	50	150	
Cr	52	45	He	0.241	ppb	9.6	2266.85	0.2	120.5	50	150	
Co	59	45	He	0.211	ppb	1.3	2339.08	0.2	105.5	50	150	
Ni	60	45	He	0.203	ppb	10.8	686.69	0.2	101.5	50	150	
As	75	72	He	0.203	ppb	8.6	155.33	0.2	101.5	50	150	
Mo	95	115	He	0.211	ppb	8.4	911.14	0.2	105.5	50	150	
Ag	107	115	He	0.215	ppb	0.9	3167.03	0.2	107.5	50	150	
Cd	111	115	He	0.213	ppb	8.6	402.68	0.2	106.5	50	150	
Ba	137	115	He	0.216	ppb	3.3	397.79	0.2	108	50	150	
Tl	205	159	He	0.200	ppb	5.7	5975.81	0.2	100	50	150	
Pb	208	159	He	0.191	ppb	5.6	8587.79	0.2	95.5	50	150	
U	238	159	He	0.200	ppb	7.5	7325.53	0.2	100	50	150	

### QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	216702.59	0.5	222181.13	97.53	60	120	
Ge (IS)	72	He	173834.24	0.7	177648.1	97.85	60	120	
In-115 (IS)	115	He	1870299.71	0.4	1890884.26	98.91	60	120	
Tb-159 (IS)	159	He	6305220.72	0.3	6270485.31	100.55	60	120	

## Reporting Limit Check (1.0x)

Sample Name	CRI-6043374
File Name	012RL_1.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 15:07:03
Sample Type	RL_1
Total Dilution	1.0000
Comment	--
Location	1301

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	%Rec	%Low	%High	QC Flag
Be	9	45	He	0.508	ppb	14.5	29.00	0.5	101.6	50	150	
Al	27	45	He	9.554	ppb	4.5	1258.72	10	95.54	50	150	
V	51	45	He	0.987	ppb	1.2	4850.79	1	98.7	50	150	
Cr	52	45	He	1.013	ppb	3.4	6901.59	1	101.3	50	150	
Mn	55	45	He	0.972	ppb	5.3	2931.41	1	97.2	50	150	
Fe	56	45	He	19.053	ppb	1.9	98652.38	20	95.26	50	150	
Co	59	45	He	0.971	ppb	2.6	10647.11	1	97.1	50	150	
Ni	60	45	He	1.007	ppb	2.4	3112.56	1	100.7	50	150	
Cu	65	45	He	1.048	ppb	1.4	4706.31	1	104.8	50	150	
Zn	66	72	He	9.765	ppb	3.5	11266.48	10	97.65	50	150	
As	75	72	He	0.995	ppb	1.9	714.35	1	99.5	50	150	
Se	78	72	He	0.997	ppb	11.5	86.00	1	99.7	50	150	
Rb	85	115	He	0.459	ppb	7.0	1345.62	0.5	91.8	50	150	
Sr	88	115	He	0.985	ppb	1.7	3766.05	1	98.5	50	150	
Mo	95	115	He	0.958	ppb	1.2	4043.90	1	95.8	50	150	
Ag	107	115	He	1.028	ppb	0.4	14961.01	1	102.8	50	150	
Cd	111	115	He	1.008	ppb	2.0	1886.12	1	100.8	50	150	
Sn	118	115	He	9.669	ppb	1.4	38222.23	10	96.69	50	150	
Sb	121	115	He	1.020	ppb	1.0	4508.50	1	102	50	150	
Cs	133	115	He	0.470	ppb	1.3	4475.16	0.5	94	50	150	
Ba	137	115	He	0.965	ppb	3.0	1660.11	1	96.5	50	150	
Ce	140	115	He	0.939	ppb	1.4	27321.54	1	93.9	50	150	
Tl	205	159	He	0.889	ppb	0.9	26447.66	1	88.9	50	150	
Pb	208	159	He	0.917	ppb	1.3	35260.14	1	91.7	50	150	
Th	232	159	He	0.918	ppb	2.7	14531.20	0.5	183.6	50	150	RL_1 Main CR1 Failed
U	238	159	He	0.897	ppb	0.9	32910.65	1	89.7	50	150	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	216826.59	0.2	222181.13	97.59	60	120	
Ge (IS)	72	He	174202.08	0.6	177648.1	98.06	60	120	
In-115 (IS)	115	He	1875531.57	0.3	1890884.26	99.19	60	120	



## Reporting Limit Check (1.0x)

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Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Tb-159 (IS)	159	He	6317846.69	0.6	6270485.31	100.76	60	120	



Agilent Technologies

## Reporting Limit Check (CRI 2.0x)

Sample Name	CRI-6043375
File Name	013RL_2.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 15:09:06
Sample Type	RL_2
Total Dilution	1.0000
Comment	—
Location	1302

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	%Rec	%Low	%High	QC Flag
Be	9	45	He	0.890	ppb	10.1	50.67	1	89	50	150	
Al	27	45	He	19.565	ppb	5.6	2500.21	20	97.82	50	150	
V	51	45	He	1.926	ppb	2.1	9374.02	2	96.3	50	150	
Cr	52	45	He	1.948	ppb	1.3	12614.13	2	97.4	50	150	
Mn	55	45	He	1.967	ppb	1.9	5825.59	2	98.35	50	150	
Fe	56	45	He	37.715	ppb	0.4	189574.92	40	94.29	50	150	
Co	59	45	He	1.884	ppb	1.4	20793.17	2	94.2	50	150	
Ni	60	45	He	2.010	ppb	2.2	6187.95	2	100.5	50	150	
Cu	65	45	He	1.998	ppb	0.8	8845.95	2	99.9	50	150	
Zn	66	72	He	19.189	ppb	1.6	21909.24	20	95.94	50	150	
As	75	72	He	1.992	ppb	3.4	1416.07	2	99.6	50	150	
Se	78	72	He	1.994	ppb	16.0	127.67	2	99.7	50	150	
Rb	85	115	He	0.935	ppb	1.7	2743.60	1	93.5	50	150	
Sr	88	115	He	1.956	ppb	1.2	7446.34	2	97.8	50	150	
Mo	95	115	He	1.921	ppb	0.8	8121.15	2	96.05	50	150	
Ag	107	115	He	2.013	ppb	0.6	29390.53	2	100.65	50	150	
Cd	111	115	He	1.936	ppb	1.8	3635.79	2	96.8	50	150	
Sn	118	115	He	19.043	ppb	1.0	75478.75	20	95.21	50	150	
Sb	121	115	He	2.032	ppb	2.0	8880.53	2	101.6	50	150	
Cs	133	115	He	0.931	ppb	0.2	8908.34	1	93.1	50	150	
Ba	137	115	He	1.977	ppb	5.5	3380.42	2	98.85	50	150	
Ce	140	115	He	1.866	ppb	0.4	54521.91	2	93.3	50	150	
Tl	205	159	He	1.762	ppb	1.5	52461.75	2	88.1	50	150	
Pb	208	159	He	1.839	ppb	1.2	69230.80	2	91.95	50	150	
Th	232	159	He	1.885	ppb	4.2	29752.75	1	188.5	50	150	RL_2 Main CR1 Failed
U	238	159	He	1.769	ppb	2.0	65013.62	2	88.45	50	150	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	218565.28	0.9	222181.13	98.37	60	120	
Ge (IS)	72	He	174117.78	1.1	177648.1	98.01	60	120	
In-115 (IS)	115	He	1885510.94	0.5	1890884.26	99.72	60	120	
Tb-159 (IS)	159	He	6331391.83	0.5	6270485.31	100.97	60	120	

# Interference Check Solution A (ICS-A) Report

Sample Name	ICSA-6043376
File Name	014ICSA.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 15:11:12
Sample Type	ICSA
Total Dilution	1.0000
Comment	--
Location	1201

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	%Low	%High	QC Flag
Be	9	45	He	0.011	ppb	160.1	1.33	-0.5	100	100	
Al	27	45	He	95724.335	ppb	0.2	12198823.33	-100000	120	100	
V	51	45	He	0.024	ppb	5.8	301.11	-2	100	100	
Cr	52	45	He	0.276	ppb	1.8	2589.12	-2	100	100	
Mn	55	45	He	0.416	ppb	3.3	1403.41	-2	100	100	
Fe	56	45	He	90378.944	ppb	0.8	452458737.57	-100000	120	120	
Co	59	45	He	0.277	ppb	4.7	3194.80	-2	100	100	
Ni	60	45	He	0.284	ppb	7.3	974.48	-2	100	100	
Cu	65	45	He	0.331	ppb	6.7	1709.00	-2	100	100	
Zn	66	72	He	0.341	ppb	2.2	618.90	-20	100	100	
As	75	72	He	0.066	ppb	11.2	59.67	-2	100	100	
Se	78	72	He	0.234	ppb	141.7	54.33	-2	100	100	
Rb	85	115	He	1.288	ppb	2.4	3647.13	-2	100	100	
Sr	88	115	He	0.822	ppb	2.4	3063.66	-2	100	100	
Mo	95	115	He	2037.035	ppb	0.7	8286084.11	-2000	120	120	
Ag	107	115	He	0.021	ppb	21.7	343.34	-2	100	100	
Cd	111	115	He	0.168	ppb	6.1	310.33	-2	100	100	
Sn	118	115	He	0.306	ppb	5.1	1362.30	-20	100	100	
Sb	121	115	He	0.209	ppb	6.0	1010.04	-2	100	100	
Cs	133	115	He	0.018	ppb	11.4	177.78	-2	100	100	
Ba	137	115	He	0.152	ppb	10.0	283.34	-2	100	100	
Ce	140	115	He	0.012	ppb	6.2	373.34	-2	100	100	
Tl	205	159	He	0.007	ppb	25.3	268.90	-2	100	100	
Pb	208	159	He	0.043	ppb	6.5	3163.49	-2	100	100	
Th	232	159	He	0.103	ppb	22.1	1735.68	-2	100	100	
U	238	159	He	0.007	ppb	12.0	273.35	-2	100	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	226588.70	2.6	222181.13	101.98	60	120	
Ge (IS)	72	He	175188.40	1.8	177648.1	98.62	60	120	
In-115 (IS)	115	He	1821467.65	1.5	1890884.26	96.33	60	120	
Tb-159 (IS)	159	He	6248068.64	0.2	6270485.31	99.64	60	120	

# Interference Check Solution AB (ICS-AB) Report

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Sample Name	ICSAB-6043377
File Name	015ICSB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 15:14:22
Sample Type	ICSB
Total Dilution	1.0000
Comment	—
Location	1202

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	%Low	%High	QC Flag
Be	9	45	He	17.460	ppb	0.8	1119.54	20	80	120	
Al	27	45	He	96301.169	ppb	0.3	13491145.33	100000	80	120	
V	51	45	He	18.592	ppb	0.4	101358.57	20	80	120	
Cr	52	45	He	18.350	ppb	1.0	127470.20	20	80	120	
Mn	55	45	He	18.769	ppb	0.4	61846.11	20	80	120	
Fe	56	45	He	89464.134	ppb	0.7	492377224.88	100200	80	120	
Co	59	45	He	17.976	ppb	0.6	225720.76	20	80	120	
Ni	60	45	He	17.631	ppb	0.8	61204.00	20	80	120	
Cu	65	45	He	17.267	ppb	0.9	85182.87	20	80	120	
Zn	66	72	He	17.760	ppb	1.4	21904.82	20	80	120	
As	75	72	He	19.164	ppb	0.4	14587.74	20	80	120	
Se	78	72	He	19.362	ppb	0.7	924.36	20	80	120	
Rb	85	115	He	21.769	ppb	0.8	63991.20	20	80	120	
Sr	88	115	He	21.070	ppb	1.1	80026.08	20	80	120	
Mo	95	115	He	2079.668	ppb	0.3	8813326.04	2020	80	120	
Ag	107	115	He	17.917	ppb	0.1	262854.56	20	80	120	
Cd	111	115	He	18.310	ppb	1.0	34549.21	20	80	120	
Sn	118	115	He	19.168	ppb	1.2	76457.22	20	80	120	
Sb	121	115	He	19.889	ppb	1.0	86181.42	20	80	120	
Cs	133	115	He	19.106	ppb	0.8	183578.60	20	80	120	
Ba	137	115	He	19.005	ppb	0.9	32404.23	20	80	120	
Ce	140	115	He	17.432	ppb	0.6	512266.72	20	80	120	
Tl	205	159	He	16.273	ppb	0.8	484522.19	20	80	120	
Pb	208	159	He	16.959	ppb	0.3	625576.44	20	80	120	
Th	232	159	He	0.385	ppb	1.2	6195.90	20	80	120	> +/- 10%
U	238	159	He	17.060	ppb	0.5	627514.95	20	80	120	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	249084.42	1.7	222181.13	112.11	60	120	
Ge (IS)	72	He	187901.56	1.7	177648.1	105.77	60	120	
In-115 (IS)	115	He	1897547.72	0.8	1890884.26	100.35	60	120	
Tb-159 (IS)	159	He	6336931.55	0.3	6270485.31	101.06	60	120	

# Sample Report

Sample Name	RINSE
File Name	016SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 15:16:32
Sample Type	Sample
Total Dilution	1.0000
Comment	—
Location	4

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	0.019	ppb	68.7	2.00	1000	
Al	27	45	He	185.446	ppb	26.5	26257.79	5000	
V	51	45	He	0.045	ppb	11.7	451.13	5000	
Cr	52	45	He	0.030	ppb	28.2	1154.50	5000	
Mn	55	45	He	0.008	ppb	193.6	201.12	4000	
Fe	56	45	He	148.136	ppb	30.8	830142.55	30000	
Co	59	45	He	0.027	ppb	39.5	383.36	5000	
Ni	60	45	He	0.025	ppb	15.0	172.23	5000	
Cu	65	45	He	0.017	ppb	33.9	340.01	5000	
Zn	66	72	He	0.026	ppb	23.4	291.12	5000	
As	75	72	He	0.034	ppb	19.3	41.33	5000	
Se	78	72	He	0.012	ppb	1321.6	50.00	5000	
Rb	85	115	He	0.022	ppb	37.2	81.11	100	
Sr	88	115	He	0.020	ppb	10.0	157.78	5000	
Mo	95	115	He	2.745	ppb	20.1	12272.75	3000	
Ag	107	115	He	0.027	ppb	11.5	466.69	100	
Cd	111	115	He	0.020	ppb	49.4	47.00	5000	
Sn	118	115	He	0.029	ppb	11.3	336.67	2000	
Sb	121	115	He	0.013	ppb	92.8	216.67	5000	
Cs	133	115	He	0.024	ppb	17.6	264.46	100	
Ba	137	115	He	0.006	ppb	189.6	48.89	5000	
Ce	140	115	He	0.021	ppb	19.9	696.79	2000	
Tl	205	159	He	0.029	ppb	34.1	936.83	5000	
Pb	208	159	He	-0.002	ppb	N/A	1579.02	5000	
Th	232	159	He	0.006	ppb	11.5	247.78	100	
U	238	159	He	0.031	ppb	47.2	1196.99	5000	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	250280.38	1.4	222181.13	112.65	60	120	
Ge (IS)	72	He	195372.31	1.4	177648.1	109.98	60	120	
In-115 (IS)	115	He	1998250.09	0.8	1890884.26	105.68	60	120	
Tb-159 (IS)	159	He	6457326.55	0.9	6270485.31	102.98	60	120	

# Sample Report

Sample Name	RINSE
File Name	017SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 15:18:36
Sample Type	Sample
Total Dilution	1.0000
Comment	—
Location	4

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	0.021	ppb	1.4	2.00	1000	
Al	27	45	He	56.318	ppb	35.5	7740.46	5000	
V	51	45	He	0.028	ppb	17.7	343.34	5000	
Cr	52	45	He	0.013	ppb	34.0	998.93	5000	
Mn	55	45	He	-0.008	ppb	N/A	143.33	4000	
Fe	56	45	He	46.021	ppb	21.8	252868.82	30000	
Co	59	45	He	0.005	ppb	36.6	102.23	5000	
Ni	60	45	He	0.009	ppb	61.5	114.44	5000	
Cu	65	45	He	0.005	ppb	180.2	270.00	5000	
Zn	66	72	He	-0.008	ppb	N/A	238.89	5000	
As	75	72	He	0.005	ppb	107.7	17.33	5000	
Se	78	72	He	0.068	ppb	269.2	51.00	5000	
Rb	85	115	He	0.007	ppb	48.8	35.55	100	
Sr	88	115	He	0.005	ppb	122.5	93.33	5000	
Mo	95	115	He	1.189	ppb	19.0	5259.48	3000	
Ag	107	115	He	0.014	ppb	12.1	272.23	100	
Cd	111	115	He	0.007	ppb	40.3	22.00	5000	
Sn	118	115	He	0.016	ppb	33.8	276.67	2000	
Sb	121	115	He	0.005	ppb	104.4	176.67	5000	
Cs	133	115	He	0.009	ppb	58.8	107.78	100	
Ba	137	115	He	0.011	ppb	19.2	56.67	5000	
Ce	140	115	He	0.007	ppb	48.7	268.90	2000	
Tl	205	159	He	0.010	ppb	37.9	375.57	5000	
Pb	208	159	He	-0.020	ppb	N/A	887.81	5000	
Th	232	159	He	0.002	ppb	56.8	168.89	100	
U	238	159	He	0.011	ppb	61.8	433.39	5000	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	240767.77	0.9	222181.13	108.37	60	120	
Ge (IS)	72	He	189185.82	1.0	177648.1	106.49	60	120	
In-115 (IS)	115	He	1967531.26	1.0	1890884.26	104.05	60	120	
Tb-159 (IS)	159	He	6398265.16	0.7	6270485.31	102.04	60	120	

# Sample Report

Sample Name	RINSE
File Name	018SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 15:20:39
Sample Type	Sample
Total Dilution	1.0000
Comment	—
Location	4

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	0.002	ppb	454.0	0.83	1000	
Al	27	45	He	23.268	ppb	56.1	3193.73	5000	
V	51	45	He	0.010	ppb	68.7	243.33	5000	
Cr	52	45	He	0.004	ppb	155.1	920.03	5000	
Mn	55	45	He	-0.005	ppb	N/A	148.89	4000	
Fe	56	45	He	19.115	ppb	6.9	107463.54	30000	
Co	59	45	He	0.004	ppb	49.1	81.11	5000	
Ni	60	45	He	0.005	ppb	115.8	96.67	5000	
Cu	65	45	He	0.006	ppb	61.2	268.89	5000	
Zn	66	72	He	-0.007	ppb	N/A	238.89	5000	
As	75	72	He	0.006	ppb	68.8	18.67	5000	
Se	78	72	He	0.261	ppb	66.7	59.33	5000	
Rb	85	115	He	0.002	ppb	140.3	20.00	100	
Sr	88	115	He	-0.003	ppb	N/A	63.33	5000	
Mo	95	115	He	0.498	ppb	23.8	2199.70	3000	
Ag	107	115	He	0.008	ppb	12.9	171.11	100	
Cd	111	115	He	0.002	ppb	99.9	11.33	5000	
Sn	118	115	He	0.010	ppb	54.8	248.89	2000	
Sb	121	115	He	-0.003	ppb	N/A	142.22	5000	
Cs	133	115	He	0.002	ppb	52.6	37.78	100	
Ba	137	115	He	-0.004	ppb	N/A	28.89	5000	
Ce	140	115	He	0.002	ppb	23.4	94.44	2000	
Tl	205	159	He	0.003	ppb	40.3	150.00	5000	
Pb	208	159	He	-0.031	ppb	N/A	473.34	5000	
Th	232	159	He	0.002	ppb	152.6	173.34	100	
U	238	159	He	0.003	ppb	59.0	113.34	5000	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	235532.65	0.8	222181.13	106.01	60	120	
Ge (IS)	72	He	187571.45	0.8	177648.1	105.59	60	120	
In-115 (IS)	115	He	1948298.58	0.3	1890884.26	103.04	60	120	
Tb-159 (IS)	159	He	6385523.49	0.3	6270485.31	101.83	60	120	

# Sample Report

Sample Name	RINSE
File Name	019SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 15:23:43
Sample Type	Sample
Total Dilution	1.0000
Comment	—
Location	4

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	0.000	ppb	N/A	0.67	1000	
Al	27	45	He	4.567	ppb	64.8	692.06	5000	
V	51	45	He	0.011	ppb	22.5	244.45	5000	
Cr	52	45	He	0.005	ppb	50.3	908.92	5000	
Mn	55	45	He	-0.011	ppb	N/A	126.67	4000	
Fe	56	45	He	4.419	ppb	47.7	30413.74	30000	
Co	59	45	He	0.001	ppb	83.9	47.78	5000	
Ni	60	45	He	0.002	ppb	203.5	87.78	5000	
Cu	65	45	He	0.005	ppb	223.8	257.78	5000	
Zn	66	72	He	-0.025	ppb	N/A	213.34	5000	
As	75	72	He	0.003	ppb	103.6	16.00	5000	
Se	78	72	He	-0.014	ppb	N/A	46.00	5000	
Rb	85	115	He	0.001	ppb	542.8	15.55	100	
Sr	88	115	He	-0.004	ppb	N/A	56.67	5000	
Mo	95	115	He	0.177	ppb	28.5	793.40	3000	
Ag	107	115	He	0.004	ppb	15.6	116.67	100	
Cd	111	115	He	-0.002	ppb	N/A	4.00	5000	
Sn	118	115	He	0.005	ppb	168.2	226.67	2000	
Sb	121	115	He	-0.007	ppb	N/A	121.11	5000	
Cs	133	115	He	0.000	ppb	N/A	15.56	100	
Ba	137	115	He	-0.012	ppb	N/A	15.55	5000	
Ce	140	115	He	0.000	ppb	151.0	45.56	2000	
Tl	205	159	He	0.001	ppb	36.3	88.89	5000	
Pb	208	159	He	-0.033	ppb	N/A	390.01	5000	
Th	232	159	He	0.000	ppb	4924.5	143.33	100	
U	238	159	He	0.001	ppb	66.6	50.00	5000	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	230888.57	0.6	222181.13	103.92	60	120	
Ge (IS)	72	He	184144.23	0.3	177648.1	103.66	60	120	
In-115 (IS)	115	He	1928575.25	0.2	1890884.26	101.99	60	120	
Tb-159 (IS)	159	He	6333792.53	0.3	6270485.31	101.01	60	120	

# Continuing Calibration Verification (CCV) Report

Sample Name	CCV-6043373
File Name	020_CCV.d
Data Path Name	D:\Agilent\CPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 15:25:46
Sample Type	CCV
Total Dilution	1.0000
Comment	—
Location	1206

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Be	9	45	He	47.354	ppb	1.8	2810.09	50	94.71	90	110	
Al	27	45	He	52.120	ppb	1.2	6859.54	50	104.24	90	110	
V	51	45	He	47.987	ppb	0.6	241928.83	50	95.97	90	110	
Cr	52	45	He	48.237	ppb	0.5	308864.83	50	96.47	90	110	
Mn	55	45	He	48.155	ppb	0.3	146677.72	50	96.31	90	110	
Fe	56	45	He	483.702	ppb	0.8	2472942.47	500	96.74	90	110	
Co	59	45	He	48.123	ppb	0.8	559441.70	50	96.25	90	110	
Ni	60	45	He	47.916	ppb	1.0	153871.49	50	95.83	90	110	
Cu	65	45	He	47.575	ppb	1.1	216882.46	50	95.15	90	110	
Zn	66	72	He	48.207	ppb	1.4	57792.21	50	96.41	90	110	
As	75	72	He	48.470	ppb	0.9	36106.17	50	96.94	90	110	
Se	78	72	He	48.726	ppb	3.4	2206.83	50	97.45	90	110	
Rb	85	115	He	48.700	ppb	1.2	146232.61	50	97.4	90	110	
Sr	88	115	He	48.972	ppb	1.2	189931.13	50	97.94	90	110	
Mo	95	115	He	48.275	ppb	0.9	209049.67	50	96.55	90	110	
Ag	107	115	He	48.681	ppb	1.1	729548.74	50	97.36	90	110	
Cd	111	115	He	48.188	ppb	0.9	92889.14	50	96.38	90	110	
Sn	118	115	He	48.081	ppb	0.5	195633.52	50	96.16	90	110	
Sb	121	115	He	48.346	ppb	0.2	213822.62	50	96.69	90	110	
Cs	133	115	He	48.071	ppb	1.1	471844.62	50	96.14	90	110	
Ba	137	115	He	47.840	ppb	1.9	83275.98	50	95.68	90	110	
Ce	140	115	He	45.480	ppb	1.4	1365349.08	50	90.96	90	110	
Tl	205	159	He	44.360	ppb	1.2	1333046.51	50	88.72	90	110	> +/- 10%
Pb	208	159	He	46.592	ppb	0.6	1731972.86	50	93.18	90	110	
Th	232	159	He	34.398	ppb	0.6	546188.99	50	68.8	90	110	> +/- 10%
U	238	159	He	46.926	ppb	4.2	1742695.49	50	93.85	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	230637.12	1.3	222181.13	103.81	60	120	
Ge (IS)	72	He	183992.34	0.6	177648.1	103.57	60	120	
In-115 (IS)	115	He	1938790.27	1.3	1890884.26	102.53	60	120	
Tb-159 (IS)	159	He	6396703.77	0.7	6270485.31	102.01	60	120	

# Continuing Calibration Blank (CCB) Report

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**Sample Name** CCB-6043371  
**File Name** 021\_CCB.d  
**Data Path Name** D:\Agilent\ICPMH\1\DATA\200114-2LL.b  
**Acq Time** 2020-01-14 15:27:49  
**Sample Type** CCB  
**Total Dilution** 1.0000  
**Comment** —  
**Location** 1207

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Be	9	45	He	0.069	ppb	39.3	4.67	0.5	
Al	27	45	He	1.569	ppb	7.4	296.68	10	
V	51	45	He	0.070	ppb	19.4	527.80	1	
Cr	52	45	He	0.060	ppb	52.2	1231.19	1	
Mn	55	45	He	0.047	ppb	30.1	298.90	1	
Fe	56	45	He	1.661	ppb	37.3	15965.13	20	
Co	59	45	He	0.072	ppb	31.7	852.35	1	
Ni	60	45	He	0.064	ppb	56.4	280.01	1	
Cu	65	45	He	0.083	ppb	28.7	598.92	1	
Zn	66	72	He	0.011	ppb	321.8	252.23	20	
As	75	72	He	0.088	ppb	18.8	78.33	1	
Se	78	72	He	0.200	ppb	174.8	54.67	1	
Rb	85	115	He	0.094	ppb	36.6	290.02	1	
Sr	88	115	He	0.095	ppb	47.6	433.36	1	
Mo	95	115	He	0.169	ppb	32.4	751.16	1	
Ag	107	115	He	0.093	ppb	49.7	1418.06	1	
Cd	111	115	He	0.083	ppb	41.3	163.67	1	
Sn	118	115	He	0.100	ppb	15.0	603.36	10	
Sb	121	115	He	0.182	ppb	12.1	941.16	1	
Cs	133	115	He	0.074	ppb	9.0	732.30	1	
Ba	137	115	He	0.073	ppb	16.7	160.01	1	
Ce	140	115	He	0.076	ppb	28.6	2296.36	1	
Tl	205	159	He	0.071	ppb	33.5	2174.08	1	
Pb	208	159	He	0.041	ppb	52.1	3128.29	1	
Th	232	159	He	0.085	ppb	11.5	1474.61	1	
U	238	159	He	0.068	ppb	25.1	2504.42	1	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	225683.08	0.8	222181.13	101.58	60	120	
Ge (IS)	72	He	181528.46	0.7	177648.1	102.18	60	120	
In-115 (IS)	115	He	1902380.06	0.2	1890884.26	100.61	60	120	
Tb-159 (IS)	159	He	6304318.50	1.1	6270485.31	100.54	60	120	

# Continuing Calibration Verification (CCV) Report

Sample Name	CCV-6043373
File Name	022_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 15:33:02
Sample Type	CCV
Total Dilution	1.0000
Comment	—
Location	1206

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Be	9	45	He	50.106	ppb	1.8	2900.93	50	100.21	90	110	
Al	27	45	He	52.044	ppb	2.6	6682.79	50	104.09	90	110	
V	51	45	He	50.435	ppb	1.3	248046.27	50	100.87	90	110	
Cr	52	45	He	50.628	ppb	1.1	316207.58	50	101.26	90	110	
Mn	55	45	He	50.683	ppb	1.7	150589.97	50	101.37	90	110	
Fe	56	45	He	504.297	ppb	1.3	2514794.90	500	100.86	90	110	
Co	59	45	He	50.527	ppb	1.0	573061.33	50	101.05	90	110	
Ni	60	45	He	50.536	ppb	1.2	158322.30	50	101.07	90	110	
Cu	65	45	He	50.296	ppb	1.0	223690.04	50	100.59	90	110	
Zn	66	72	He	50.046	ppb	0.7	59318.10	50	100.09	90	110	
As	75	72	He	50.273	ppb	0.7	37029.73	50	100.55	90	110	
Se	78	72	He	51.589	ppb	1.8	2307.85	50	103.18	90	110	
Rb	85	115	He	50.821	ppb	0.5	150827.92	50	101.64	90	110	
Sr	88	115	He	50.429	ppb	0.6	193296.31	50	100.86	90	110	
Mo	95	115	He	50.213	ppb	0.6	214907.55	50	100.43	90	110	
Ag	107	115	He	50.742	ppb	0.1	751588.37	50	101.48	90	110	
Cd	111	115	He	50.444	ppb	0.5	96104.64	50	100.89	90	110	
Sn	118	115	He	50.211	ppb	0.9	201907.27	50	100.42	90	110	
Sb	121	115	He	50.615	ppb	0.6	221225.47	50	101.23	90	110	
Cs	133	115	He	50.104	ppb	0.4	486074.41	50	100.21	90	110	
Ba	137	115	He	49.692	ppb	1.2	85497.83	50	99.38	90	110	
Ce	140	115	He	46.753	ppb	0.9	1387248.10	50	93.51	90	110	
Tl	205	159	He	46.596	ppb	0.6	1399098.45	50	93.19	90	110	
Pb	208	159	He	48.553	ppb	0.3	1803337.36	50	97.11	90	110	
Th	232	159	He	1.006	ppb	2.5	16099.64	50	2.01	90	110	> +/- 10%
U	238	159	He	50.089	ppb	0.4	1858252.26	50	100.18	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	225005.57	0.8	222181.13	101.27	60	120	
Ge (IS)	72	He	181930.69	0.2	177648.1	102.41	60	120	
In-115 (IS)	115	He	1916084.55	0.3	1890884.26	101.33	60	120	
Tb-159 (IS)	159	He	6391327.80	0.3	6270485.31	101.93	60	120	

# Continuing Calibration Blank (CCB) Report

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**Sample Name** CCB-6043371  
**File Name** 023\_CCB.d  
**Data Path Name** D:\Agilent\ICPMH\1\DATA\200114-2LL.b  
**Acq Time** 2020-01-14 15:35:06  
**Sample Type** CCB  
**Total Dilution** 1.0000  
**Comment** —  
**Location** 1207

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Be	9	45	He	0.068	ppb	51.8	4.50	0.5	
Al	27	45	He	0.567	ppb	43.9	165.33	10	
V	51	45	He	0.092	ppb	8.4	620.03	1	
Cr	52	45	He	0.076	ppb	33.2	1295.63	1	
Mn	55	45	He	0.049	ppb	29.0	295.56	1	
Fe	56	45	He	0.769	ppb	21.9	11218.60	20	
Co	59	45	He	0.072	ppb	24.1	834.56	1	
Ni	60	45	He	0.066	ppb	29.3	278.90	1	
Cu	65	45	He	0.063	ppb	26.7	496.69	1	
Zn	66	72	He	0.032	ppb	120.3	272.23	20	
As	75	72	He	0.085	ppb	30.4	74.00	1	
Se	78	72	He	0.176	ppb	49.7	52.67	1	
Rb	85	115	He	0.093	ppb	34.5	284.46	1	
Sr	88	115	He	0.094	ppb	24.0	423.36	1	
Mo	95	115	He	0.158	ppb	8.3	690.05	1	
Ag	107	115	He	0.085	ppb	18.3	1282.46	1	
Cd	111	115	He	0.078	ppb	16.1	153.00	1	
Sn	118	115	He	0.090	ppb	16.0	555.58	10	
Sb	121	115	He	0.220	ppb	14.3	1086.73	1	
Cs	133	115	He	0.075	ppb	9.4	731.20	1	
Ba	137	115	He	0.064	ppb	47.7	142.22	1	
Ce	140	115	He	0.075	ppb	33.5	2216.40	1	
Tl	205	159	He	0.086	ppb	37.3	2630.35	1	
Pb	208	159	He	0.052	ppb	49.0	3524.15	1	
Th	232	159	He	0.004	ppb	37.4	202.23	1	
U	238	159	He	0.084	ppb	37.5	3105.70	1	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	220148.65	0.3	222181.13	99.09	60	120	
Ge (IS)	72	He	178075.60	0.4	177648.1	100.24	60	120	
In-115 (IS)	115	He	1873211.66	0.3	1890884.26	99.07	60	120	
Tb-159 (IS)	159	He	6307545.86	0.4	6270485.31	100.59	60	120	

# Method Blank (MB) Report

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**Sample Name** mb 440-590297\_1-a@20  
**File Name** 024\_PB.d  
**Data Path Name** D:\Agilent\ICPMH\1\DATA\200114-2LL.b  
**Acq Time** 2020-01-14 15:37:14  
**Sample Type** MB  
**Total Dilution** 1.0000  
**Comment** CAM SOIL 590297 BHES  
**Location** 4301

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Be	9	45	He	0.039	ppb	58.2	2.83	0.5	
Al	27	45	He	2.461	ppb	8.9	393.34	10	
V	51	45	He	0.050	ppb	7.1	410.01	1	
Cr	52	45	He	0.102	ppb	13.8	1432.30	1	
Mn	55	45	He	0.104	ppb	9.3	447.79	1	
Fe	56	45	He	4.350	ppb	7.5	28175.49	20	
Co	59	45	He	0.031	ppb	35.8	376.68	1	
Ni	60	45	He	0.074	ppb	9.1	296.67	1	
Cu	65	45	He	0.891	ppb	6.7	4030.56	1	
Zn	66	72	He	1.231	ppb	11.9	1616.76	20	
As	75	72	He	0.036	ppb	7.7	38.33	1	
Se	78	72	He	0.088	ppb	16.3	47.67	1	
Rb	85	115	He	0.032	ppb	21.5	104.45	1	
Sr	88	115	He	0.055	ppb	2.8	271.12	1	
Mo	95	115	He	0.072	ppb	8.4	324.45	1	
Ag	107	115	He	0.032	ppb	27.3	506.70	1	
Cd	111	115	He	0.030	ppb	43.1	61.33	1	
Sn	118	115	He	1.007	ppb	1.4	4077.27	10	
Sb	121	115	He	0.081	ppb	14.0	482.24	1	
Cs	133	115	He	0.025	ppb	15.6	246.68	1	
Ba	137	115	He	0.110	ppb	4.6	215.56	1	
Ce	140	115	He	0.025	ppb	7.1	766.74	1	
Tl	205	159	He	0.023	ppb	10.2	737.85	1	
Pb	208	159	He	0.059	ppb	11.7	3658.03	1	
Th	232	159	He	0.008	ppb	26.7	260.00	1	
U	238	159	He	0.025	ppb	7.5	893.45	1	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	216630.39	0.6	222181.13	97.5	60	120	
Ge (IS)	72	He	173725.09	0.7	177648.1	97.79	60	120	
In-115 (IS)	115	He	1837866.71	0.7	1890884.26	97.2	60	120	
Tb-159 (IS)	159	He	6131099.48	0.6	6270485.31	97.78	60	120	

# Sample Report

Sample Name	Ics 440-590297_2-a@20
File Name	025SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 15:39:18
Sample Type	Sample
Total Dilution	1.0000
Comment	CAM SOIL 590297 BHES
Location	4302

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	90.660	ppb	1.0	5124.50	1000	
Al	27	45	He	93.006	ppb	1.2	11585.67	5000	
V	51	45	He	90.059	ppb	0.9	432318.73	5000	
Cr	52	45	He	90.914	ppb	0.8	553735.36	5000	
Mn	55	45	He	90.214	ppb	0.7	261600.17	4000	
Fe	56	45	He	92.220	ppb	0.9	455110.59	30000	
Co	59	45	He	91.223	ppb	0.9	1010134.55	5000	
Ni	60	45	He	91.599	ppb	0.5	280125.92	5000	
Cu	65	45	He	92.079	ppb	0.4	399645.88	5000	
Zn	66	72	He	89.873	ppb	1.6	102401.11	5000	
As	75	72	He	91.373	ppb	1.4	64804.20	5000	
Se	78	72	He	91.004	ppb	4.1	3886.51	5000	
Rb	85	115	He	0.020	ppb	15.0	70.00	100	
Sr	88	115	He	91.876	ppb	1.5	339282.01	5000	
Mo	95	115	He	90.253	ppb	0.9	372190.47	3000	
Ag	107	115	He	47.988	ppb	0.5	684926.09	100	
Cd	111	115	He	90.811	ppb	0.9	166707.30	5000	
Sn	118	115	He	91.531	ppb	1.0	354503.45	2000	
Sb	121	115	He	93.358	ppb	0.9	393070.11	5000	
Cs	133	115	He	0.012	ppb	19.7	131.12	100	
Ba	137	115	He	93.226	ppb	0.6	154536.33	5000	
Ce	140	115	He	0.015	ppb	14.2	465.58	2000	
Tl	205	159	He	90.769	ppb	0.7	2638415.73	5000	
Pb	208	159	He	90.839	ppb	1.8	3265010.47	5000	
Th	232	159	He	0.037	ppb	15.3	701.13	100	
U	238	159	He	0.012	ppb	18.7	450.04	5000	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	219678.54	0.3	222181.13	98.87	60	120	
Ge (IS)	72	He	175209.47	0.4	177648.1	98.63	60	120	
In-115 (IS)	115	He	1846390.16	0.5	1890884.26	97.65	60	120	
Tb-159 (IS)	159	He	6187256.42	0.4	6270485.31	98.67	60	120	

# Sample Report

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Sample Name	440-258875-b-1-a@20
File Name	026SMPL.d
Data Path Name	D:\Agilent\CPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 15:41:22
Sample Type	Sample
Total Dilution	1.0000
Comment	CAM SOIL 590297 BHES
Location	4303

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	0.899	ppb	2.7	53.33	1000	
Al	27	45	He	14154.487	ppb	0.2	1811150.29	5000	>LDR
V	51	45	He	60.261	ppb	0.5	299641.20	5000	
Cr	52	45	He	12.148	ppb	0.1	77373.98	5000	
Mn	55	45	He	410.915	ppb	0.4	1233432.90	4000	
Fe	56	45	He	24159.178	ppb	0.4	121455710.73	30000	
Co	59	45	He	9.449	ppb	0.7	108386.28	5000	
Ni	60	45	He	10.334	ppb	0.4	32799.87	5000	
Cu	65	45	He	126.854	ppb	0.2	570094.87	5000	
Zn	66	72	He	42.193	ppb	0.5	49126.21	5000	
As	75	72	He	10.263	ppb	1.1	7430.85	5000	
Se	78	72	He	2.016	ppb	14.5	132.00	5000	
Rb	85	115	He	19.383	ppb	0.4	55322.18	100	
Sr	88	115	He	133.789	ppb	1.1	492976.73	5000	
Mo	95	115	He	1.204	ppb	5.4	4984.28	3000	
Ag	107	115	He	0.136	ppb	10.6	1985.90	100	
Cd	111	115	He	0.237	ppb	16.8	441.68	5000	
Sn	118	115	He	1.942	ppb	1.8	7698.77	2000	
Sb	121	115	He	1.031	ppb	3.9	4475.20	5000	
Cs	133	115	He	3.362	ppb	0.7	31374.05	100	
Ba	137	115	He	163.460	ppb	0.6	270354.75	5000	
Ce	140	115	He	43.278	ppb	0.8	1234788.39	2000	
Tl	205	159	He	0.255	ppb	14.3	7535.60	5000	
Pb	208	159	He	9.496	ppb	0.4	345856.00	5000	
Th	232	159	He	24.397	ppb	0.4	378193.40	100	
U	238	159	He	2.388	ppb	1.1	86570.78	5000	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	227498.49	0.5	222181.13	102.39	60	120	
Ge (IS)	72	He	178578.91	0.1	177648.1	100.52	60	120	
In-115 (IS)	115	He	1842412.79	0.3	1890884.26	97.44	60	120	
Tb-159 (IS)	159	He	6244351.98	0.7	6270485.31	99.58	60	120	

# Sample Report

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<b>Sample Name</b>	440-258875-b-1-b ms@20
<b>File Name</b>	027SMPL.d
<b>Data Path Name</b>	D:\Agilent\CPMH\1\DATA\200114-2LL.b
<b>Acq Time</b>	2020-01-14 15:43:26
<b>Sample Type</b>	Sample
<b>Total Dilution</b>	1.0000
<b>Comment</b>	CAM SOIL 590297 BHES
<b>Location</b>	4304

**QC Analyte Table**

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	84.208	ppb	0.8	4955.61	1000	
Al	27	45	He	17185.680	ppb	0.2	2210626.67	5000	>LDR
V	51	45	He	138.199	ppb	0.2	690556.13	5000	
Cr	52	45	He	94.950	ppb	0.5	602010.10	5000	
Mn	55	45	He	552.375	ppb	0.4	1666791.60	4000	
Fe	56	45	He	21534.400	ppb	0.1	108833126.79	30000	
Co	59	45	He	90.778	ppb	0.3	1046475.93	5000	
Ni	60	45	He	91.827	ppb	0.6	292347.66	5000	
Cu	65	45	He	197.123	ppb	0.1	890435.38	5000	
Zn	66	72	He	125.159	ppb	0.3	144937.57	5000	
As	75	72	He	93.787	ppb	0.6	67647.99	5000	
Se	78	72	He	84.499	ppb	1.9	3673.45	5000	
Rb	85	115	He	19.558	ppb	0.6	55893.31	100	
Sr	88	115	He	273.601	ppb	0.3	1009407.04	5000	
Mo	95	115	He	84.808	ppb	0.2	349446.04	3000	
Ag	107	115	He	44.885	ppb	0.3	640086.40	100	
Cd	111	115	He	85.539	ppb	0.4	156900.18	5000	
Sn	118	115	He	87.229	ppb	0.2	337566.49	2000	
Sb	121	115	He	63.282	ppb	0.6	266254.94	5000	
Cs	133	115	He	3.408	ppb	1.5	31853.99	100	
Ba	137	115	He	330.644	ppb	0.4	547526.61	5000	
Ce	140	115	He	46.279	ppb	0.4	1322097.17	2000	
Tl	205	159	He	84.458	ppb	0.5	2469101.50	5000	
Pb	208	159	He	92.210	ppb	0.3	3333132.42	5000	
Th	232	159	He	23.133	ppb	0.5	357372.72	100	
U	238	159	He	1.937	ppb	0.7	69998.18	5000	

**QC ISTD Table**

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	228700.84	1.2	222181.13	102.93	60	120	
Ge (IS)	72	He	178182.08	1.0	177648.1	100.3	60	120	
In-115 (IS)	115	He	1844784.63	0.8	1890884.26	97.56	60	120	
Tb-159 (IS)	159	He	6222810.03	0.2	6270485.31	99.24	60	120	

# Sample Report

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<b>Sample Name</b>	440-258875-b-1-c msd@20
<b>File Name</b>	028SMPL.d
<b>Data Path Name</b>	D:\Agilent\CPMH\1\DATA\200114-2LL.b
<b>Acq Time</b>	2020-01-14 15:45:29
<b>Sample Type</b>	Sample
<b>Total Dilution</b>	1.0000
<b>Comment</b>	CAM SOIL 590297 BHES
<b>Location</b>	4305

**QC Analyte Table**

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	84.297	ppb	2.2	5008.80	1000	
Al	27	45	He	17287.520	ppb	1.2	2245188.42	5000	>LDR
V	51	45	He	143.985	ppb	0.9	726441.86	5000	
Cr	52	45	He	97.564	ppb	0.9	624564.65	5000	
Mn	55	45	He	489.209	ppb	0.7	1490445.35	4000	
Fe	56	45	He	23470.917	ppb	0.7	119765844.13	30000	
Co	59	45	He	91.533	ppb	0.9	1065388.39	5000	
Ni	60	45	He	93.420	ppb	0.7	300303.29	5000	
Cu	65	45	He	207.475	ppb	1.2	946217.36	5000	
Zn	66	72	He	129.589	ppb	0.4	150151.24	5000	
As	75	72	He	95.419	ppb	0.3	68865.13	5000	
Se	78	72	He	86.783	ppb	0.7	3773.81	5000	
Rb	85	115	He	21.208	ppb	0.3	60174.21	100	
Sr	88	115	He	208.806	ppb	0.5	764853.86	5000	
Mo	95	115	He	85.740	ppb	0.5	350761.20	3000	
Ag	107	115	He	45.849	ppb	0.3	649171.97	100	
Cd	111	115	He	87.719	ppb	0.6	159746.49	5000	
Sn	118	115	He	88.122	ppb	0.5	338585.93	2000	
Sb	121	115	He	64.502	ppb	0.7	269452.70	5000	
Cs	133	115	He	3.693	ppb	0.3	34263.91	100	
Ba	137	115	He	229.136	ppb	0.4	376746.58	5000	
Ce	140	115	He	46.613	ppb	0.7	1322148.84	2000	
Tl	205	159	He	85.338	ppb	1.0	2501840.87	5000	
Pb	208	159	He	93.169	ppb	1.0	3377226.24	5000	
Th	232	159	He	27.297	ppb	0.1	422888.53	100	
U	238	159	He	2.418	ppb	0.9	87600.69	5000	

**QC ISTD Table**

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	230918.88	0.9	222181.13	103.93	60	120	
Ge (IS)	72	He	178288.60	0.0	177648.1	100.36	60	120	
In-115 (IS)	115	He	1831619.22	0.3	1890884.26	96.87	60	120	
Tb-159 (IS)	159	He	6240574.33	0.7	6270485.31	99.52	60	120	

# Sample Report

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<b>Sample Name</b>	440-258875-b-1-aPDS@20
<b>File Name</b>	029SMPL.d
<b>Data Path Name</b>	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
<b>Acq Time</b>	2020-01-14 15:47:34
<b>Sample Type</b>	Sample
<b>Total Dilution</b>	1.0000
<b>Comment</b>	CAM SOIL 590297 BHES
<b>Location</b>	4306

**QC Analyte Table**

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	94.139	ppb	0.4	5465.95	1000	
Al	27	45	He	14039.492	ppb	0.6	1781880.83	5000	>LDR
V	51	45	He	152.910	ppb	0.2	753882.78	5000	
Cr	52	45	He	105.100	ppb	0.3	657425.50	5000	
Mn	55	45	He	512.330	ppb	0.6	1525344.87	4000	
Fe	56	45	He	24822.028	ppb	0.8	123775866.19	30000	
Co	59	45	He	102.484	ppb	0.6	1165713.36	5000	
Ni	60	45	He	102.624	ppb	0.2	322374.16	5000	
Cu	65	45	He	218.095	ppb	0.8	972028.05	5000	
Zn	66	72	He	133.239	ppb	0.1	153677.48	5000	
As	75	72	He	104.690	ppb	0.4	75213.33	5000	
Se	78	72	He	95.274	ppb	2.0	4119.90	5000	
Rb	85	115	He	117.460	ppb	0.4	330290.29	100	>LDR
Sr	88	115	He	231.911	ppb	0.3	842035.83	5000	
Mo	95	115	He	99.859	ppb	0.0	404936.89	3000	
Ag	107	115	He	98.808	ppb	0.3	1386680.36	100	>LDR
Cd	111	115	He	96.467	ppb	0.3	174136.32	5000	
Sn	118	115	He	100.060	ppb	0.2	381054.75	2000	
Sb	121	115	He	100.812	ppb	0.3	417366.61	5000	
Cs	133	115	He	100.968	ppb	0.3	928123.96	100	>LDR
Ba	137	115	He	262.170	ppb	0.2	427271.50	5000	
Ce	140	115	He	141.353	ppb	0.3	3974224.01	2000	
Tl	205	159	He	95.338	ppb	0.9	2782106.35	5000	
Pb	208	159	He	104.926	ppb	0.5	3785736.83	5000	
Th	232	159	He	30.688	ppb	0.8	473193.82	100	
U	238	159	He	98.557	ppb	0.7	3553502.76	5000	

**QC ISTD Table**

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	225654.80	0.3	222181.13	101.56	60	120	
Ge (IS)	72	He	177483.91	0.4	177648.1	99.91	60	120	
In-115 (IS)	115	He	1815555.83	0.6	1890884.26	96.02	60	120	
Tb-159 (IS)	159	He	6211597.39	0.4	6270485.31	99.06	60	120	

# Sample Report

<b>Sample Name</b>	440-258875-b-1-aSD@100
<b>File Name</b>	030SMPL.d
<b>Data Path Name</b>	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
<b>Acq Time</b>	2020-01-14 15:53:09
<b>Sample Type</b>	Sample
<b>Total Dilution</b>	1.0000
<b>Comment</b>	CAM SOIL 590297 BHES
<b>Location</b>	4307

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	0.164	ppb	34.1	10.33	1000	
Al	27	45	He	2744.986	ppb	0.8	351756.37	5000	
V	51	45	He	12.140	ppb	1.3	60588.59	5000	
Cr	52	45	He	2.513	ppb	0.8	16709.19	5000	
Mn	55	45	He	83.000	ppb	1.0	249581.10	4000	
Fe	56	45	He	4910.949	ppb	0.7	24726179.02	30000	
Co	59	45	He	1.916	ppb	2.0	22033.82	5000	
Ni	60	45	He	2.119	ppb	1.4	6798.22	5000	
Cu	65	45	He	25.899	ppb	1.2	116726.90	5000	
Zn	66	72	He	8.879	ppb	0.9	10618.21	5000	
As	75	72	He	2.035	ppb	0.6	1497.41	5000	
Se	78	72	He	0.338	ppb	26.7	60.33	5000	
Rb	85	115	He	3.758	ppb	0.8	11047.48	100	
Sr	88	115	He	26.177	ppb	1.2	99321.52	5000	
Mo	95	115	He	0.251	ppb	8.0	1093.38	3000	
Ag	107	115	He	0.037	ppb	9.7	596.70	100	
Cd	111	115	He	0.055	ppb	9.7	111.33	5000	
Sn	118	115	He	0.383	ppb	3.6	1724.56	2000	
Sb	121	115	He	0.276	ppb	10.5	1343.41	5000	
Cs	133	115	He	0.686	ppb	0.4	6606.00	100	
Ba	137	115	He	32.445	ppb	0.4	55255.63	5000	
Ce	140	115	He	8.530	ppb	1.2	250493.36	2000	
Tl	205	159	He	0.059	ppb	13.6	1839.09	5000	
Pb	208	159	He	1.884	ppb	0.6	71149.27	5000	
Th	232	159	He	4.719	ppb	0.6	74564.45	100	
U	238	159	He	0.486	ppb	2.1	17935.63	5000	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	227790.34	0.6	222181.13	102.52	60	120	
Ge (IS)	72	He	180195.80	1.2	177648.1	101.43	60	120	
In-115 (IS)	115	He	1896088.30	0.8	1890884.26	100.28	60	120	
Tb-159 (IS)	159	He	6355294.47	1.4	6270485.31	101.35	60	120	

# Continuing Calibration Verification (CCV) Report

Sample Name	CCV-6043373
File Name	031_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 16:00:14
Sample Type	CCV
Total Dilution	1.0000
Comment	—
Location	1206

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Be	9	45	He	50.877	ppb	1.8	2941.11	50	101.75	90	110	
Al	27	45	He	51.683	ppb	4.2	6626.76	50	103.37	90	110	
V	51	45	He	50.226	ppb	0.6	246631.86	50	100.45	90	110	
Cr	52	45	He	50.320	ppb	0.7	313783.24	50	100.64	90	110	
Mn	55	45	He	50.247	ppb	0.6	149059.66	50	100.49	90	110	
Fe	56	45	He	501.005	ppb	0.7	2494479.21	500	100.2	90	110	
Co	59	45	He	50.460	ppb	0.2	571381.70	50	100.92	90	110	
Ni	60	45	He	50.570	ppb	0.4	158174.28	50	101.14	90	110	
Cu	65	45	He	50.193	ppb	0.4	222868.10	50	100.39	90	110	
Zn	66	72	He	50.516	ppb	1.0	58766.02	50	101.03	90	110	
As	75	72	He	50.625	ppb	1.6	36599.03	50	101.25	90	110	
Se	78	72	He	51.419	ppb	2.7	2257.84	50	102.84	90	110	
Rb	85	115	He	50.860	ppb	0.6	147962.86	50	101.72	90	110	
Sr	88	115	He	50.792	ppb	0.4	190845.13	50	101.58	90	110	
Mo	95	115	He	50.888	ppb	0.4	213505.10	50	101.78	90	110	
Ag	107	115	He	51.127	ppb	0.5	742344.43	50	102.25	90	110	
Cd	111	115	He	50.711	ppb	0.6	94706.03	50	101.42	90	110	
Sn	118	115	He	50.556	ppb	0.8	199281.32	50	101.11	90	110	
Sb	121	115	He	51.255	ppb	0.5	219603.89	50	102.51	90	110	
Cs	133	115	He	50.405	ppb	0.2	479352.48	50	100.81	90	110	
Ba	137	115	He	50.331	ppb	1.1	84893.26	50	100.66	90	110	
Ce	140	115	He	47.243	ppb	0.4	1374135.46	50	94.49	90	110	
Tl	205	159	He	46.957	ppb	0.9	1386487.97	50	93.91	90	110	
Pb	208	159	He	49.125	ppb	0.7	1794226.29	50	98.25	90	110	
Th	232	159	He	1.017	ppb	3.8	15995.05	50	2.03	90	110	> +/- 10%
U	238	159	He	50.145	ppb	0.3	1829408.93	50	100.29	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	224632.21	0.5	222181.13	101.1	60	120	
Ge (IS)	72	He	178574.28	0.7	177648.1	100.52	60	120	
In-115 (IS)	115	He	1878280.38	0.6	1890884.26	99.33	60	120	
Tb-159 (IS)	159	He	6285211.97	0.9	6270485.31	100.23	60	120	

# Continuing Calibration Blank (CCB) Report

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**Sample Name** CCB-6043371  
**File Name** 032\_CCB.d  
**Data Path Name** D:\Agilent\ICPMH\1\DATA\200114-2LL.b  
**Acq Time** 2020-01-14 16:02:19  
**Sample Type** CCB  
**Total Dilution** 1.0000  
**Comment** —  
**Location** 1207

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Be	9	45	He	0.104	ppb	36.9	6.50	0.5	
Al	27	45	He	0.358	ppb	40.8	138.00	10	
V	51	45	He	0.069	ppb	30.9	503.36	1	
Cr	52	45	He	0.094	ppb	26.6	1396.77	1	
Mn	55	45	He	0.079	ppb	46.8	380.02	1	
Fe	56	45	He	1.030	ppb	46.7	12379.19	20	
Co	59	45	He	0.087	ppb	29.5	991.24	1	
Ni	60	45	He	0.098	ppb	52.4	372.24	1	
Cu	65	45	He	0.082	ppb	58.7	576.70	1	
Zn	66	72	He	0.034	ppb	188.9	272.23	20	
As	75	72	He	0.085	ppb	68.2	73.67	1	
Se	78	72	He	0.062	ppb	199.9	47.33	1	
Rb	85	115	He	0.062	ppb	40.1	190.00	1	
Sr	88	115	He	0.066	ppb	41.5	314.46	1	
Mo	95	115	He	0.102	ppb	7.9	454.46	1	
Ag	107	115	He	0.069	ppb	9.2	1039.01	1	
Cd	111	115	He	0.060	ppb	13.0	118.00	1	
Sn	118	115	He	0.088	ppb	11.5	540.02	10	
Sb	121	115	He	0.214	ppb	11.1	1051.17	1	
Cs	133	115	He	0.082	ppb	20.5	787.86	1	
Ba	137	115	He	0.076	ppb	32.5	161.11	1	
Ce	140	115	He	0.077	ppb	19.7	2245.17	1	
Tl	205	159	He	0.077	ppb	15.7	2320.62	1	
Pb	208	159	He	0.056	ppb	24.8	3623.87	1	
Th	232	159	He	0.006	ppb	84.3	237.78	1	
U	238	159	He	0.078	ppb	20.0	2841.02	1	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	218016.65	0.8	222181.13	98.13	60	120	
Ge (IS)	72	He	176414.65	0.8	177648.1	99.31	60	120	
In-115 (IS)	115	He	1853807.95	0.6	1890884.26	98.04	60	120	
Tb-159 (IS)	159	He	6219903.36	0.9	6270485.31	99.19	60	120	

# Sample Report

Sample Name	440-258875-b-2-a@20
File Name	033SMPL.d
Data Path Name	D:\Agilent\CPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 16:04:22
Sample Type	Sample
Total Dilution	1.0000
Comment	CAM SOIL 590297 BHES
Location	4308

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	0.778	ppb	21.9	45.83	1000	
Al	27	45	He	14885.736	ppb	0.3	1887388.88	5000	>LDR
V	51	45	He	64.529	ppb	0.6	317928.99	5000	
Cr	52	45	He	14.582	ppb	0.4	91860.10	5000	
Mn	55	45	He	432.562	ppb	0.6	1286586.79	4000	
Fe	56	45	He	24945.402	ppb	0.7	124266986.17	30000	
Co	59	45	He	8.577	ppb	0.5	97500.73	5000	
Ni	60	45	He	10.203	ppb	0.8	32087.21	5000	
Cu	65	45	He	124.988	ppb	0.2	556604.08	5000	
Zn	66	72	He	46.870	ppb	0.3	53943.67	5000	
As	75	72	He	9.530	ppb	1.2	6824.55	5000	
Se	78	72	He	2.262	ppb	5.6	141.00	5000	
Rb	85	115	He	20.847	ppb	0.7	58342.51	100	
Sr	88	115	He	116.418	ppb	0.6	420645.30	5000	
Mo	95	115	He	1.102	ppb	2.6	4474.03	3000	
Ag	107	115	He	0.065	ppb	9.8	963.38	100	
Cd	111	115	He	0.112	ppb	8.5	207.33	5000	
Sn	118	115	He	1.950	ppb	2.2	7579.77	2000	
Sb	121	115	He	0.674	ppb	3.7	2916.98	5000	
Cs	133	115	He	3.600	ppb	1.6	32943.12	100	
Ba	137	115	He	142.345	ppb	0.5	230856.87	5000	
Ce	140	115	He	50.024	ppb	0.2	1399535.57	2000	
Tl	205	159	He	0.152	ppb	4.5	4430.81	5000	
Pb	208	159	He	7.559	ppb	0.7	269995.62	5000	
Th	232	159	He	24.074	ppb	0.5	365564.81	100	
U	238	159	He	2.170	ppb	0.8	77053.10	5000	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	225430.48	0.4	222181.13	101.46	60	120	
Ge (IS)	72	He	176608.95	0.5	177648.1	99.42	60	120	
In-115 (IS)	115	He	1806595.04	0.3	1890884.26	95.54	60	120	
Tb-159 (IS)	159	He	6116850.17	0.7	6270485.31	97.55	60	120	

# Sample Report

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Sample Name	440-258875-b-3-a@20
File Name	034SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 16:06:26
Sample Type	Sample
Total Dilution	1.0000
Comment	CAM SOIL 590297 BHES
Location	4309

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	0.714	ppb	9.7	42.17	1000	
Al	27	45	He	14728.599	ppb	0.9	1871968.46	5000	>LDR
V	51	45	He	62.227	ppb	0.8	307333.32	5000	
Cr	52	45	He	13.568	ppb	1.6	85734.95	5000	
Mn	55	45	He	514.524	ppb	1.2	1534026.64	4000	
Fe	56	45	He	23857.297	ppb	1.1	119133266.38	30000	
Co	59	45	He	9.002	ppb	1.0	102570.75	5000	
Ni	60	45	He	10.682	ppb	0.8	33672.85	5000	
Cu	65	45	He	126.617	ppb	1.0	565216.99	5000	
Zn	66	72	He	45.766	ppb	1.3	52436.23	5000	
As	75	72	He	9.372	ppb	1.1	6680.83	5000	
Se	78	72	He	2.553	ppb	8.3	152.67	5000	
Rb	85	115	He	20.310	ppb	0.8	56843.50	100	
Sr	88	115	He	120.140	ppb	0.9	434112.46	5000	
Mo	95	115	He	1.216	ppb	1.9	4936.40	3000	
Ag	107	115	He	0.037	ppb	1.2	562.24	100	
Cd	111	115	He	0.109	ppb	4.2	202.00	5000	
Sn	118	115	He	1.931	ppb	2.1	7506.41	2000	
Sb	121	115	He	0.604	ppb	3.3	2628.03	5000	
Cs	133	115	He	3.603	ppb	0.3	32972.06	100	
Ba	137	115	He	179.199	ppb	0.5	290633.66	5000	
Ce	140	115	He	50.706	ppb	0.6	1418672.44	2000	
Tl	205	159	He	0.142	ppb	1.3	4158.44	5000	
Pb	208	159	He	7.649	ppb	1.0	274345.60	5000	
Th	232	159	He	27.912	ppb	0.7	425610.65	100	
U	238	159	He	2.585	ppb	0.5	92184.55	5000	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	225977.43	0.5	222181.13	101.71	60	120	
Ge (IS)	72	He	175792.21	0.2	177648.1	98.96	60	120	
In-115 (IS)	115	He	1806676.84	0.2	1890884.26	95.55	60	120	
Tb-159 (IS)	159	He	6142482.95	0.3	6270485.31	97.96	60	120	

# Sample Report

Sample Name	440-258875-b-4-a@20
File Name	035SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 16:08:29
Sample Type	Sample
Total Dilution	1.0000
Comment	CAM SOIL 590297 BHES
Location	4310

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	0.819	ppb	10.2	47.67	1000	
Al	27	45	He	15267.786	ppb	0.6	1915825.37	5000	>LDR
V	51	45	He	61.306	ppb	0.6	298936.88	5000	
Cr	52	45	He	14.852	ppb	0.6	92574.54	5000	
Mn	55	45	He	405.780	ppb	0.5	1194461.48	4000	
Fe	56	45	He	24116.851	ppb	0.6	118899110.83	30000	
Co	59	45	He	8.532	ppb	0.5	95979.06	5000	
Ni	60	45	He	10.406	ppb	1.0	32387.87	5000	
Cu	65	45	He	120.934	ppb	0.3	532995.03	5000	
Zn	66	72	He	46.608	ppb	0.5	52775.13	5000	
As	75	72	He	9.716	ppb	1.6	6845.23	5000	
Se	78	72	He	2.794	ppb	13.4	161.00	5000	
Rb	85	115	He	20.637	ppb	0.3	57495.87	100	
Sr	88	115	He	128.968	ppb	0.4	463884.08	5000	
Mo	95	115	He	1.018	ppb	5.6	4120.60	3000	
Ag	107	115	He	0.031	ppb	7.0	477.79	100	
Cd	111	115	He	0.094	ppb	5.8	174.33	5000	
Sn	118	115	He	1.915	ppb	2.7	7414.14	2000	
Sb	121	115	He	0.578	ppb	4.6	2510.23	5000	
Cs	133	115	He	3.685	ppb	1.0	33570.13	100	
Ba	137	115	He	154.774	ppb	0.6	249880.95	5000	
Ce	140	115	He	53.740	ppb	3.4	1496738.62	2000	
Tl	205	159	He	0.131	ppb	2.3	3791.65	5000	
Pb	208	159	He	7.099	ppb	1.4	252165.30	5000	
Th	232	159	He	28.255	ppb	0.5	426487.27	100	
U	238	159	He	2.403	ppb	1.0	84836.31	5000	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	223101.33	0.4	222181.13	100.41	60	120	
Ge (IS)	72	He	173749.59	0.1	177648.1	97.81	60	120	
In-115 (IS)	115	He	1798448.46	0.2	1890884.26	95.11	60	120	
Tb-159 (IS)	159	He	6080488.51	0.8	6270485.31	96.97	60	120	

# Sample Report

Sample Name	440-258875-b-5-a@20
File Name	036SMPL.d
Data Path Name	D:\Agilent\CPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 16:10:33
Sample Type	Sample
Total Dilution	1.0000
Comment	CAM SOIL 590297 BHES
Location	4311

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	0.794	ppb	9.6	46.33	1000	
Al	27	45	He	16161.534	ppb	0.7	2031164.87	5000	>LDR
V	51	45	He	68.910	ppb	0.7	336527.47	5000	
Cr	52	45	He	16.712	ppb	1.0	104231.21	5000	
Mn	55	45	He	521.510	ppb	0.7	1537520.88	4000	
Fe	56	45	He	27814.495	ppb	0.7	137343696.76	30000	>LDR
Co	59	45	He	8.814	ppb	1.4	99310.46	5000	
Ni	60	45	He	11.171	ppb	0.8	34816.52	5000	
Cu	65	45	He	217.580	ppb	0.2	960258.57	5000	
Zn	66	72	He	47.401	ppb	0.8	54011.69	5000	
As	75	72	He	12.220	ppb	1.7	8660.49	5000	
Se	78	72	He	3.054	ppb	3.4	173.00	5000	
Rb	85	115	He	23.087	ppb	0.3	64146.08	100	
Sr	88	115	He	120.200	ppb	0.3	431191.55	5000	
Mo	95	115	He	2.848	ppb	2.8	11437.79	3000	
Ag	107	115	He	0.044	ppb	10.4	655.57	100	
Cd	111	115	He	0.100	ppb	14.0	185.33	5000	
Sn	118	115	He	1.998	ppb	1.9	7703.18	2000	
Sb	121	115	He	0.826	ppb	2.4	3519.33	5000	
Cs	133	115	He	3.706	ppb	0.8	33669.24	100	
Ba	137	115	He	174.515	ppb	0.9	280996.65	5000	
Ce	140	115	He	51.395	ppb	0.4	1427554.32	2000	
Tl	205	159	He	0.168	ppb	2.4	4895.34	5000	
Pb	208	159	He	15.954	ppb	0.7	569135.39	5000	
Th	232	159	He	26.182	ppb	0.2	398278.86	100	
U	238	159	He	3.227	ppb	1.1	114807.11	5000	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	223446.71	0.8	222181.13	100.57	60	120	
Ge (IS)	72	He	174860.26	0.7	177648.1	98.43	60	120	
In-115 (IS)	115	He	1793618.35	0.7	1890884.26	94.86	60	120	
Tb-159 (IS)	159	He	6127550.73	0.5	6270485.31	97.72	60	120	

# Sample Report

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Sample Name	440-258875-b-6-a@20
File Name	037SMPL.d
Data Path Name	D:\Agilent\CPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 16:12:39
Sample Type	Sample
Total Dilution	1.0000
Comment	CAM SOIL 590297 BHES
Location	4312

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	0.821	ppb	4.5	47.67	1000	
Al	27	45	He	15780.985	ppb	0.8	1975028.25	5000	>LDR
V	51	45	He	67.517	ppb	0.7	328344.60	5000	
Cr	52	45	He	15.378	ppb	0.6	95573.86	5000	
Mn	55	45	He	540.262	ppb	0.4	1586125.84	4000	
Fe	56	45	He	27412.318	ppb	0.6	134791025.76	30000	>LDR
Co	59	45	He	9.795	ppb	0.7	109890.23	5000	
Ni	60	45	He	11.535	ppb	0.6	35798.87	5000	
Cu	65	45	He	218.446	ppb	0.3	960062.15	5000	
Zn	66	72	He	45.882	ppb	1.0	52010.28	5000	
As	75	72	He	11.176	ppb	1.3	7879.74	5000	
Se	78	72	He	2.671	ppb	11.2	156.00	5000	
Rb	85	115	He	22.350	ppb	0.7	62190.16	100	
Sr	88	115	He	123.800	ppb	0.3	444754.88	5000	
Mo	95	115	He	2.455	ppb	1.7	9878.90	3000	
Ag	107	115	He	0.031	ppb	2.4	485.56	100	
Cd	111	115	He	0.103	ppb	8.5	191.00	5000	
Sn	118	115	He	1.828	ppb	1.8	7075.09	2000	
Sb	121	115	He	0.721	ppb	2.7	3092.57	5000	
Cs	133	115	He	3.516	ppb	0.3	31988.74	100	
Ba	137	115	He	166.245	ppb	0.6	268072.51	5000	
Ce	140	115	He	50.295	ppb	0.3	1399053.80	2000	
Tl	205	159	He	0.162	ppb	2.3	4733.06	5000	
Pb	208	159	He	14.208	ppb	0.7	507845.53	5000	
Th	232	159	He	28.289	ppb	1.2	430979.19	100	
U	238	159	He	3.426	ppb	1.5	122066.73	5000	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	222518.65	0.3	222181.13	100.15	60	120	
Ge (IS)	72	He	173931.65	0.9	177648.1	97.91	60	120	
In-115 (IS)	115	He	1796267.84	0.7	1890884.26	95	60	120	
Tb-159 (IS)	159	He	6137466.28	0.9	6270485.31	97.88	60	120	

# Sample Report

Sample Name	440-258875-b-7-a@20
File Name	038SMPL.d
Data Path Name	D:\Agilent\CPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 16:14:45
Sample Type	Sample
Total Dilution	1.0000
Comment	CAM SOIL 590297 BHES
Location	4401

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	0.660	ppb	13.2	38.33	1000	
Al	27	45	He	16273.372	ppb	0.8	2031503.88	5000	>LDR
V	51	45	He	64.444	ppb	1.0	312614.32	5000	
Cr	52	45	He	19.152	ppb	1.1	118522.25	5000	
Mn	55	45	He	505.829	ppb	0.9	1481285.18	4000	
Fe	56	45	He	27202.596	ppb	0.7	133421385.81	30000	>LDR
Co	59	45	He	8.890	ppb	0.5	99496.95	5000	
Ni	60	45	He	11.164	ppb	1.6	34562.67	5000	
Cu	65	45	He	254.517	ppb	0.4	1115729.19	5000	
Zn	66	72	He	48.693	ppb	1.0	55464.68	5000	
As	75	72	He	11.457	ppb	1.8	8118.53	5000	
Se	78	72	He	2.470	ppb	2.9	148.33	5000	
Rb	85	115	He	23.669	ppb	0.2	65861.40	100	
Sr	88	115	He	122.177	ppb	0.7	438939.59	5000	
Mo	95	115	He	3.184	ppb	1.2	12802.23	3000	
Ag	107	115	He	0.043	ppb	6.8	642.24	100	
Cd	111	115	He	0.129	ppb	14.4	236.67	5000	
Sn	118	115	He	2.021	ppb	1.2	7803.24	2000	
Sb	121	115	He	0.703	ppb	3.9	3021.44	5000	
Cs	133	115	He	3.671	ppb	0.2	33401.94	100	
Ba	137	115	He	178.903	ppb	1.0	288488.63	5000	
Ce	140	115	He	57.630	ppb	1.1	1603133.34	2000	
Tl	205	159	He	0.168	ppb	1.4	4886.45	5000	
Pb	208	159	He	10.699	ppb	1.4	382211.29	5000	
Th	232	159	He	26.418	ppb	0.9	401866.56	100	
U	238	159	He	2.936	ppb	1.7	104460.20	5000	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	221954.50	0.4	222181.13	99.9	60	120	
Ge (IS)	72	He	174822.41	0.4	177648.1	98.41	60	120	
In-115 (IS)	115	He	1796336.46	0.3	1890884.26	95	60	120	
Tb-159 (IS)	159	He	6128002.54	0.8	6270485.31	97.73	60	120	

# Sample Report

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<b>Sample Name</b>	440-258875-b-8-a@20
<b>File Name</b>	039SMPL.d
<b>Data Path Name</b>	D:\Agilent\CPMH\1\DATA\200114-2LL.b
<b>Acq Time</b>	2020-01-14 16:16:51
<b>Sample Type</b>	Sample
<b>Total Dilution</b>	1.0000
<b>Comment</b>	CAM SOIL 590297 BHES
<b>Location</b>	4402

**QC Analyte Table**

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	0.814	ppb	2.7	48.17	1000	
Al	27	45	He	16727.102	ppb	1.1	2133660.92	5000	>LDR
V	51	45	He	63.417	ppb	1.1	314342.27	5000	
Cr	52	45	He	21.889	ppb	1.3	138294.50	5000	
Mn	55	45	He	620.070	ppb	1.4	1855372.35	4000	
Fe	56	45	He	27023.899	ppb	1.3	135433665.73	30000	>LDR
Co	59	45	He	8.603	ppb	1.3	98382.01	5000	
Ni	60	45	He	11.672	ppb	1.7	36920.42	5000	
Cu	65	45	He	130.909	ppb	1.2	586486.38	5000	
Zn	66	72	He	50.766	ppb	0.5	58817.31	5000	
As	75	72	He	9.639	ppb	0.5	6950.94	5000	
Se	78	72	He	2.838	ppb	13.4	166.67	5000	
Rb	85	115	He	22.955	ppb	0.8	64948.49	100	
Sr	88	115	He	133.135	ppb	0.7	486340.99	5000	
Mo	95	115	He	2.962	ppb	1.4	12112.79	3000	
Ag	107	115	He	0.035	ppb	9.8	538.90	100	
Cd	111	115	He	0.095	ppb	10.7	179.00	5000	
Sn	118	115	He	2.197	ppb	2.9	8608.13	2000	
Sb	121	115	He	0.752	ppb	4.6	3273.72	5000	
Cs	133	115	He	3.720	ppb	1.5	34416.50	100	
Ba	137	115	He	191.356	ppb	1.0	313755.27	5000	
Ce	140	115	He	65.765	ppb	1.2	1860185.48	2000	
Tl	205	159	He	0.158	ppb	1.3	4640.80	5000	
Pb	208	159	He	12.046	ppb	1.0	433838.88	5000	
Th	232	159	He	33.429	ppb	1.8	512841.89	100	
U	238	159	He	2.673	ppb	1.9	95893.33	5000	

**QC ISTD Table**

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	226794.64	0.1	222181.13	102.08	60	120	
Ge (IS)	72	He	177847.27	0.5	177648.1	100.11	60	120	
In-115 (IS)	115	He	1826501.85	0.2	1890884.26	96.6	60	120	
Tb-159 (IS)	159	He	6180406.28	0.1	6270485.31	98.56	60	120	

# Sample Report

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<b>Sample Name</b>	440-258875-b-9-a@20
<b>File Name</b>	040SMPL.d
<b>Data Path Name</b>	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
<b>Acq Time</b>	2020-01-14 16:18:57
<b>Sample Type</b>	Sample
<b>Total Dilution</b>	1.0000
<b>Comment</b>	CAM SOIL 590297 BHES
<b>Location</b>	4403

**QC Analyte Table**

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	1.017	ppb	14.8	60.50	1000	
Al	27	45	He	17126.224	ppb	0.6	2201715.17	5000	>LDR
V	51	45	He	61.228	ppb	0.7	305883.87	5000	
Cr	52	45	He	17.050	ppb	1.0	108760.13	5000	
Mn	55	45	He	566.094	ppb	0.7	1707179.59	4000	
Fe	56	45	He	25162.978	ppb	0.8	127097834.95	30000	
Co	59	45	He	8.378	ppb	0.7	96560.55	5000	
Ni	60	45	He	9.918	ppb	1.8	31629.60	5000	
Cu	65	45	He	92.702	ppb	1.0	418641.44	5000	
Zn	66	72	He	53.168	ppb	0.2	61413.07	5000	
As	75	72	He	8.895	ppb	1.0	6397.37	5000	
Se	78	72	He	3.021	ppb	5.5	174.00	5000	
Rb	85	115	He	26.186	ppb	0.6	74314.13	100	
Sr	88	115	He	145.747	ppb	0.6	534019.63	5000	
Mo	95	115	He	2.237	ppb	0.6	9184.00	3000	
Ag	107	115	He	0.031	ppb	2.2	484.45	100	
Cd	111	115	He	0.107	ppb	2.0	202.00	5000	
Sn	118	115	He	2.280	ppb	1.0	8953.89	2000	
Sb	121	115	He	0.621	ppb	3.6	2735.82	5000	
Cs	133	115	He	4.227	ppb	1.6	39226.64	100	
Ba	137	115	He	214.756	ppb	0.8	353185.80	5000	
Ce	140	115	He	64.766	ppb	0.4	1837484.23	2000	
Tl	205	159	He	0.163	ppb	3.6	4786.41	5000	
Pb	208	159	He	10.088	ppb	0.9	362129.71	5000	
Th	232	159	He	34.811	ppb	1.2	531935.53	100	
U	238	159	He	2.570	ppb	0.3	91859.00	5000	

**QC ISTD Table**

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	228572.82	0.1	222181.13	102.88	60	120	
Ge (IS)	72	He	177337.57	0.5	177648.1	99.83	60	120	
In-115 (IS)	115	He	1832040.42	0.2	1890884.26	96.89	60	120	
Tb-159 (IS)	159	He	6156005.87	0.5	6270485.31	98.17	60	120	

# Sample Report

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<b>Sample Name</b>	440-258875-b-11-a@20
<b>File Name</b>	041SMPL.d
<b>Data Path Name</b>	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
<b>Acq Time</b>	2020-01-14 16:21:01
<b>Sample Type</b>	Sample
<b>Total Dilution</b>	1.0000
<b>Comment</b>	CAM SOIL 590297 BHES
<b>Location</b>	4404

**QC Analyte Table**

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	0.902	ppb	7.8	54.33	1000	
Al	27	45	He	16632.848	ppb	1.1	2163594.33	5000	>LDR
V	51	45	He	59.710	ppb	1.3	301832.15	5000	
Cr	52	45	He	18.421	ppb	0.9	118820.98	5000	
Mn	55	45	He	554.973	ppb	1.4	1693430.11	4000	
Fe	56	45	He	26264.656	ppb	1.4	134230434.67	30000	
Co	59	45	He	8.151	ppb	1.2	95057.78	5000	
Ni	60	45	He	10.645	ppb	1.4	34344.38	5000	
Cu	65	45	He	116.393	ppb	1.5	531782.18	5000	
Zn	66	72	He	53.149	ppb	1.1	62101.45	5000	
As	75	72	He	8.862	ppb	0.5	6447.38	5000	
Se	78	72	He	3.576	ppb	18.6	200.00	5000	
Rb	85	115	He	24.051	ppb	1.2	68353.68	100	
Sr	88	115	He	117.042	ppb	0.5	429470.77	5000	
Mo	95	115	He	2.935	ppb	1.1	12056.08	3000	
Ag	107	115	He	0.035	ppb	9.1	542.24	100	
Cd	111	115	He	0.103	ppb	3.8	195.67	5000	
Sn	118	115	He	2.313	ppb	1.0	9091.76	2000	
Sb	121	115	He	0.630	ppb	2.0	2778.06	5000	
Cs	133	115	He	3.714	ppb	1.3	34518.99	100	
Ba	137	115	He	186.363	ppb	0.9	306932.98	5000	
Ce	140	115	He	70.297	ppb	0.6	1997239.85	2000	
Tl	205	159	He	0.154	ppb	3.4	4538.54	5000	
Pb	208	159	He	9.923	ppb	1.0	358382.52	5000	
Th	232	159	He	31.272	ppb	0.6	480745.21	100	
U	238	159	He	2.543	ppb	0.6	91439.45	5000	

**QC ISTD Table**

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	231285.03	0.5	222181.13	104.1	60	120	
Ge (IS)	72	He	179399.49	1.0	177648.1	100.99	60	120	
In-115 (IS)	115	He	1834668.28	0.2	1890884.26	97.03	60	120	
Tb-159 (IS)	159	He	6193027.11	0.3	6270485.31	98.76	60	120	

# Sample Report

Sample Name	440-258875-b-12-a@20
File Name	042SMPL.d
Data Path Name	D:\Agilent\CPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 16:23:07
Sample Type	Sample
Total Dilution	1.0000
Comment	CAM SOIL 590297 BHES
Location	4405

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	0.825	ppb	12.6	49.67	1000	
Al	27	45	He	17156.051	ppb	1.2	2227565.92	5000	>LDR
V	51	45	He	64.071	ppb	1.2	323272.05	5000	
Cr	52	45	He	20.939	ppb	1.6	134703.94	5000	
Mn	55	45	He	619.495	ppb	0.8	1886875.06	4000	
Fe	56	45	He	27703.183	ppb	1.0	141325087.72	30000	>LDR
Co	59	45	He	8.452	ppb	1.0	98382.15	5000	
Ni	60	45	He	9.992	ppb	2.2	32183.01	5000	
Cu	65	45	He	85.276	ppb	1.1	388973.19	5000	
Zn	66	72	He	55.493	ppb	1.3	64836.26	5000	
As	75	72	He	9.175	ppb	0.1	6674.82	5000	
Se	78	72	He	3.529	ppb	3.4	198.00	5000	
Rb	85	115	He	25.833	ppb	0.7	73557.04	100	
Sr	88	115	He	129.186	ppb	0.8	474940.59	5000	
Mo	95	115	He	2.450	ppb	1.2	10089.04	3000	
Ag	107	115	He	0.032	ppb	1.6	505.57	100	
Cd	111	115	He	0.099	ppb	5.1	187.67	5000	
Sn	118	115	He	2.410	ppb	2.7	9483.11	2000	
Sb	121	115	He	0.597	ppb	1.6	2645.81	5000	
Cs	133	115	He	4.142	ppb	2.0	38569.23	100	
Ba	137	115	He	198.475	ppb	0.7	327512.23	5000	
Ce	140	115	He	70.640	ppb	0.8	2010869.92	2000	
Tl	205	159	He	0.168	ppb	3.0	4952.03	5000	
Pb	208	159	He	9.956	ppb	0.3	359635.63	5000	
Th	232	159	He	32.934	ppb	1.0	506379.39	100	
U	238	159	He	2.468	ppb	1.6	88744.73	5000	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	230856.22	0.6	222181.13	103.9	60	120	
Ge (IS)	72	He	179403.11	0.4	177648.1	100.99	60	120	
In-115 (IS)	115	He	1838191.60	0.2	1890884.26	97.21	60	120	
Tb-159 (IS)	159	He	6194311.14	0.5	6270485.31	98.79	60	120	

# Continuing Calibration Verification (CCV) Report

Sample Name	CCV-6043373
File Name	043_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 16:38:49
Sample Type	CCV
Total Dilution	1.0000
Comment	—
Location	1206

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Be	9	45	He	50.025	ppb	3.0	2930.27	50	100.05	90	110	
Al	27	45	He	51.993	ppb	1.0	6754.82	50	103.99	90	110	
V	51	45	He	50.918	ppb	0.7	253368.69	50	101.84	90	110	
Cr	52	45	He	51.079	ppb	0.8	322774.87	50	102.16	90	110	
Mn	55	45	He	50.739	ppb	0.1	152542.40	50	101.48	90	110	
Fe	56	45	He	506.941	ppb	1.0	2557791.08	500	101.39	90	110	
Co	59	45	He	50.809	ppb	0.5	583055.45	50	101.62	90	110	
Ni	60	45	He	50.611	ppb	0.7	160425.24	50	101.22	90	110	
Cu	65	45	He	50.545	ppb	0.4	227438.70	50	101.09	90	110	
Zn	66	72	He	50.378	ppb	0.9	60339.95	50	100.76	90	110	
As	75	72	He	50.532	ppb	0.4	37613.19	50	101.06	90	110	
Se	78	72	He	50.425	ppb	1.8	2280.51	50	100.85	90	110	
Rb	85	115	He	51.117	ppb	1.3	151872.72	50	102.23	90	110	
Sr	88	115	He	51.001	ppb	0.7	195711.99	50	102	90	110	
Mo	95	115	He	50.618	ppb	1.1	216881.79	50	101.24	90	110	
Ag	107	115	He	50.883	ppb	1.2	754496.50	50	101.77	90	110	
Cd	111	115	He	50.376	ppb	1.3	96080.46	50	100.75	90	110	
Sn	118	115	He	50.490	ppb	0.8	203262.82	50	100.98	90	110	
Sb	121	115	He	50.507	ppb	0.2	221020.47	50	101.01	90	110	
Cs	133	115	He	50.084	ppb	1.1	486429.24	50	100.17	90	110	
Ba	137	115	He	49.541	ppb	1.8	85330.30	50	99.08	90	110	
Ce	140	115	He	46.589	ppb	1.2	1383932.10	50	93.18	90	110	
Tl	205	159	He	46.717	ppb	1.1	1390301.09	50	93.43	90	110	
Pb	208	159	He	48.596	ppb	1.4	1788867.12	50	97.19	90	110	
Th	232	159	He	1.051	ppb	4.5	16658.08	50	2.1	90	110	> +/- 10%
U	238	159	He	49.870	ppb	0.2	1833766.07	50	99.74	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	227649.53	0.9	222181.13	102.46	60	120	
Ge (IS)	72	He	183846.89	0.4	177648.1	103.49	60	120	
In-115 (IS)	115	He	1918360.08	1.1	1890884.26	101.45	60	120	
Tb-159 (IS)	159	He	6334892.52	0.9	6270485.31	101.03	60	120	

# Continuing Calibration Blank (CCB) Report

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**Sample Name** CCB-6043371  
**File Name** 044\_CCB.d  
**Data Path Name** D:\Agilent\ICPMH\1\DATA\200114-2LL.b  
**Acq Time** 2020-01-14 16:40:53  
**Sample Type** CCB  
**Total Dilution** 1.0000  
**Comment** —  
**Location** 1207

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Be	9	45	He	0.072	ppb	79.4	4.83	0.5	
Al	27	45	He	0.264	ppb	101.2	130.67	10	
V	51	45	He	0.084	ppb	14.1	594.47	1	
Cr	52	45	He	0.086	ppb	19.6	1385.65	1	
Mn	55	45	He	0.063	ppb	18.8	344.46	1	
Fe	56	45	He	0.684	ppb	24.5	11038.40	20	
Co	59	45	He	0.066	ppb	25.3	785.65	1	
Ni	60	45	He	0.066	ppb	34.5	283.34	1	
Cu	65	45	He	0.079	ppb	33.9	576.70	1	
Zn	66	72	He	0.019	ppb	72.6	258.90	20	
As	75	72	He	0.066	ppb	31.9	61.00	1	
Se	78	72	He	0.098	ppb	212.7	49.67	1	
Rb	85	115	He	0.066	ppb	33.2	207.78	1	
Sr	88	115	He	0.070	ppb	44.3	337.80	1	
Mo	95	115	He	0.107	ppb	13.0	482.25	1	
Ag	107	115	He	0.073	ppb	24.8	1120.20	1	
Cd	111	115	He	0.062	ppb	45.3	123.67	1	
Sn	118	115	He	0.069	ppb	45.6	476.68	10	
Sb	121	115	He	0.191	ppb	3.4	971.16	1	
Cs	133	115	He	0.064	ppb	52.0	631.20	1	
Ba	137	115	He	0.055	ppb	59.1	128.89	1	
Ce	140	115	He	0.061	ppb	39.3	1836.18	1	
Tl	205	159	He	0.072	ppb	35.5	2183.20	1	
Pb	208	159	He	0.046	ppb	50.0	3251.81	1	
Th	232	159	He	0.006	ppb	75.0	237.78	1	
U	238	159	He	0.073	ppb	8.7	2674.77	1	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	224834.32	0.6	222181.13	101.19	60	120	
Ge (IS)	72	He	179545.84	1.2	177648.1	101.07	60	120	
In-115 (IS)	115	He	1886525.98	0.7	1890884.26	99.77	60	120	
Tb-159 (IS)	159	He	6235138.92	0.4	6270485.31	99.44	60	120	

# Sample Report

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<b>Sample Name</b>	440-258875-b-13-a@20
<b>File Name</b>	045SMPL.d
<b>Data Path Name</b>	D:\Agilent\CPMH\1\DATA\200114-2LL.b
<b>Acq Time</b>	2020-01-14 16:42:56
<b>Sample Type</b>	Sample
<b>Total Dilution</b>	1.0000
<b>Comment</b>	CAM SOIL 590297 BHES
<b>Location</b>	4406

**QC Analyte Table**

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	0.849	ppb	2.3	51.67	1000	
Al	27	45	He	16885.090	ppb	0.7	2217019.75	5000	>LDR
V	51	45	He	64.228	ppb	0.6	327705.66	5000	
Cr	52	45	He	20.820	ppb	0.8	135439.32	5000	
Mn	55	45	He	561.170	ppb	1.0	1728438.20	4000	
Fe	56	45	He	26840.557	ppb	0.7	138462430.05	30000	
Co	59	45	He	7.973	ppb	1.0	93855.83	5000	
Ni	60	45	He	9.732	ppb	0.6	31699.77	5000	
Cu	65	45	He	69.665	ppb	0.7	321374.04	5000	
Zn	66	72	He	55.806	ppb	1.3	66117.25	5000	
As	75	72	He	12.382	ppb	0.9	9131.11	5000	
Se	78	72	He	3.122	ppb	7.1	183.00	5000	
Rb	85	115	He	25.025	ppb	1.1	72104.51	100	
Sr	88	115	He	117.139	ppb	0.6	435779.62	5000	
Mo	95	115	He	2.494	ppb	0.6	10391.47	3000	
Ag	107	115	He	0.055	ppb	8.9	836.71	100	
Cd	111	115	He	0.137	ppb	5.2	260.67	5000	
Sn	118	115	He	2.557	ppb	0.4	10171.36	2000	
Sb	121	115	He	0.808	ppb	4.2	3573.79	5000	
Cs	133	115	He	4.124	ppb	1.2	38848.85	100	
Ba	137	115	He	183.531	ppb	0.3	306445.02	5000	
Ce	140	115	He	71.779	ppb	0.4	2067551.79	2000	
Tl	205	159	He	0.176	ppb	2.9	5222.16	5000	
Pb	208	159	He	10.281	ppb	0.6	373670.39	5000	
Th	232	159	He	30.906	ppb	1.0	478230.15	100	
U	238	159	He	2.422	ppb	0.9	87661.07	5000	

**QC ISTD Table**

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	233444.23	0.4	222181.13	105.07	60	120	
Ge (IS)	72	He	181936.70	0.9	177648.1	102.41	60	120	
In-115 (IS)	115	He	1860029.26	0.7	1890884.26	98.37	60	120	
Tb-159 (IS)	159	He	6233605.59	0.5	6270485.31	99.41	60	120	

# Sample Report

Sample Name	440-258875-b-14-a@20
File Name	046SMPL.d
Data Path Name	D:\Agilent\CPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 16:45:03
Sample Type	Sample
Total Dilution	1.0000
Comment	CAM SOIL 590297 BHES
Location	4407

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	0.936	ppb	7.8	56.00	1000	
Al	27	45	He	15748.317	ppb	0.4	2034544.91	5000	>LDR
V	51	45	He	61.570	ppb	0.7	309109.71	5000	
Cr	52	45	He	16.992	ppb	0.3	108921.40	5000	
Mn	55	45	He	627.057	ppb	0.7	1900338.19	4000	
Fe	56	45	He	24564.697	ppb	1.0	124688497.27	30000	
Co	59	45	He	8.248	ppb	0.6	95528.45	5000	
Ni	60	45	He	9.863	ppb	0.2	31608.42	5000	
Cu	65	45	He	61.209	ppb	0.7	277861.01	5000	
Zn	66	72	He	51.313	ppb	1.4	60332.07	5000	
As	75	72	He	8.484	ppb	1.3	6210.62	5000	
Se	78	72	He	2.904	ppb	11.2	172.00	5000	
Rb	85	115	He	24.284	ppb	1.4	69258.90	100	
Sr	88	115	He	125.134	ppb	0.4	460795.61	5000	
Mo	95	115	He	1.377	ppb	1.9	5691.12	3000	
Ag	107	115	He	0.037	ppb	3.2	580.02	100	
Cd	111	115	He	0.110	ppb	3.6	208.00	5000	
Sn	118	115	He	2.431	ppb	2.2	9579.86	2000	
Sb	121	115	He	0.720	ppb	1.4	3168.13	5000	
Cs	133	115	He	4.102	ppb	0.7	38255.04	100	
Ba	137	115	He	196.785	ppb	0.7	325247.01	5000	
Ce	140	115	He	70.417	ppb	0.5	2007770.41	2000	
Tl	205	159	He	0.167	ppb	2.3	4955.37	5000	
Pb	208	159	He	10.406	ppb	0.4	377461.45	5000	
Th	232	159	He	32.196	ppb	0.5	497222.93	100	
U	238	159	He	2.192	ppb	1.6	79185.55	5000	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	229697.55	0.4	222181.13	103.38	60	120	
Ge (IS)	72	He	180495.74	0.6	177648.1	101.6	60	120	
In-115 (IS)	115	He	1841209.36	0.4	1890884.26	97.37	60	120	
Tb-159 (IS)	159	He	6221426.42	0.2	6270485.31	99.22	60	120	

# Sample Report

Sample Name	440-258875-b-15-a@20
File Name	047SMPL.d
Data Path Name	D:\Agilent\CPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 16:47:07
Sample Type	Sample
Total Dilution	1.0000
Comment	CAM SOIL 590297 BHES
Location	4408

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	0.911	ppb	9.9	54.67	1000	
Al	27	45	He	16275.638	ppb	0.8	2109664.54	5000	>LDR
V	51	45	He	62.063	ppb	0.8	312609.80	5000	
Cr	52	45	He	15.828	ppb	1.1	101859.83	5000	
Mn	55	45	He	565.788	ppb	0.8	1720347.46	4000	
Fe	56	45	He	25081.492	ppb	0.8	127732986.04	30000	
Co	59	45	He	8.022	ppb	0.9	93224.18	5000	
Ni	60	45	He	9.571	ppb	2.2	30780.12	5000	
Cu	65	45	He	69.058	ppb	0.7	314498.58	5000	
Zn	66	72	He	54.228	ppb	0.4	63307.46	5000	
As	75	72	He	11.440	ppb	2.1	8311.97	5000	
Se	78	72	He	3.611	ppb	5.3	201.33	5000	
Rb	85	115	He	23.958	ppb	0.4	68619.27	100	
Sr	88	115	He	172.375	ppb	0.8	637408.65	5000	
Mo	95	115	He	1.314	ppb	4.9	5455.48	3000	
Ag	107	115	He	0.031	ppb	6.9	501.12	100	
Cd	111	115	He	0.112	ppb	5.3	213.33	5000	
Sn	118	115	He	2.255	ppb	2.9	8938.34	2000	
Sb	121	115	He	0.728	ppb	1.1	3215.93	5000	
Cs	133	115	He	4.143	ppb	0.4	38798.71	100	
Ba	137	115	He	327.164	ppb	0.3	542999.94	5000	
Ce	140	115	He	70.491	ppb	1.0	2018383.60	2000	
Tl	205	159	He	0.151	ppb	2.4	4494.09	5000	
Pb	208	159	He	9.482	ppb	0.7	346319.54	5000	
Th	232	159	He	37.514	ppb	1.1	583043.85	100	
U	238	159	He	2.658	ppb	2.2	96618.84	5000	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	230458.94	0.4	222181.13	103.73	60	120	
Ge (IS)	72	He	179246.66	0.6	177648.1	100.9	60	120	
In-115 (IS)	115	He	1848959.62	0.2	1890884.26	97.78	60	120	
Tb-159 (IS)	159	He	6261407.81	0.3	6270485.31	99.86	60	120	

# Sample Report

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<b>Sample Name</b>	440-258875-b-16-a@20
<b>File Name</b>	048SMPL.d
<b>Data Path Name</b>	D:\Agilent\CPMH\1\DATA\200114-2LL.b
<b>Acq Time</b>	2020-01-14 16:49:11
<b>Sample Type</b>	Sample
<b>Total Dilution</b>	1.0000
<b>Comment</b>	CAM SOIL 590297 BHES
<b>Location</b>	4409

**QC Analyte Table**

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	0.848	ppb	10.2	50.67	1000	
Al	27	45	He	15162.531	ppb	0.9	1952925.63	5000	>LDR
V	51	45	He	59.143	ppb	0.4	296024.23	5000	
Cr	52	45	He	15.835	ppb	0.7	101256.84	5000	
Mn	55	45	He	531.933	ppb	0.6	1607167.57	4000	
Fe	56	45	He	23788.296	ppb	0.8	120379426.33	30000	
Co	59	45	He	7.958	ppb	1.4	91892.84	5000	
Ni	60	45	He	9.231	ppb	1.2	29498.67	5000	
Cu	65	45	He	82.604	ppb	1.0	373759.46	5000	
Zn	66	72	He	50.322	ppb	1.1	58420.22	5000	
As	75	72	He	9.802	ppb	1.8	7082.34	5000	
Se	78	72	He	2.924	ppb	8.9	170.67	5000	
Rb	85	115	He	23.973	ppb	0.3	68498.79	100	
Sr	88	115	He	110.730	ppb	0.7	408501.04	5000	
Mo	95	115	He	1.394	ppb	2.9	5774.49	3000	
Ag	107	115	He	0.033	ppb	2.4	516.68	100	
Cd	111	115	He	0.103	ppb	8.9	196.67	5000	
Sn	118	115	He	2.285	ppb	1.1	9035.06	2000	
Sb	121	115	He	0.602	ppb	4.7	2674.71	5000	
Cs	133	115	He	4.085	ppb	0.2	38168.17	100	
Ba	137	115	He	180.164	ppb	0.7	298318.61	5000	
Ce	140	115	He	65.035	ppb	1.0	1857661.94	2000	
Tl	205	159	He	0.158	ppb	0.5	4693.05	5000	
Pb	208	159	He	9.151	ppb	0.7	333337.82	5000	
Th	232	159	He	31.387	ppb	0.5	486477.12	100	
U	238	159	He	2.369	ppb	1.8	85890.36	5000	

**QC ISTD Table**

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	229000.71	0.1	222181.13	103.07	60	120	
Ge (IS)	72	He	178202.17	0.6	177648.1	100.31	60	120	
In-115 (IS)	115	He	1844551.41	0.4	1890884.26	97.55	60	120	
Tb-159 (IS)	159	He	6243904.20	0.4	6270485.31	99.58	60	120	

# Sample Report

Sample Name	440-258875-b-17-a@20
File Name	049SMPL.d
Data Path Name	D:\Agilent\CPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 16:51:14
Sample Type	Sample
Total Dilution	1.0000
Comment	CAM SOIL 590297 BHES
Location	4410

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	0.757	ppb	5.3	45.00	1000	
Al	27	45	He	16544.617	ppb	1.4	2118678.25	5000	>LDR
V	51	45	He	64.056	ppb	1.0	318759.65	5000	
Cr	52	45	He	16.674	ppb	0.5	105968.55	5000	
Mn	55	45	He	672,026	ppb	1.4	2018737.00	4000	
Fe	56	45	He	26041.523	ppb	1.1	131024763.68	30000	
Co	59	45	He	11.171	ppb	1.1	128235.82	5000	
Ni	60	45	He	10,442	ppb	1.1	33168.42	5000	
Cu	65	45	He	146,609	ppb	1.0	659382.51	5000	
Zn	66	72	He	47.633	ppb	0.5	55785.85	5000	
As	75	72	He	12,359	ppb	0.8	9003.03	5000	
Se	78	72	He	3.090	ppb	12.1	179.33	5000	
Rb	85	115	He	22,414	ppb	0.7	64054.66	100	
Sr	88	115	He	164,313	ppb	0.6	606243.66	5000	
Mo	95	115	He	2,082	ppb	2.1	8608.10	3000	
Ag	107	115	He	0.045	ppb	6.5	696.69	100	
Cd	111	115	He	0.107	ppb	3.5	204.33	5000	
Sn	118	115	He	2.145	ppb	1.6	8494.73	2000	
Sb	121	115	He	0.603	ppb	5.9	2680.26	5000	
Cs	133	115	He	3.637	ppb	0.6	33983.27	100	
Ba	137	115	He	218,863	ppb	0.3	362451.42	5000	
Ce	140	115	He	61.496	ppb	0.6	1756883.85	2000	
Tl	205	159	He	0.150	ppb	3.6	4470.74	5000	
Pb	208	159	He	10.596	ppb	0.5	386852.59	5000	
Th	232	159	He	29.081	ppb	1.5	452073.70	100	
U	238	159	He	2.704	ppb	1.4	98317.16	5000	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	227691.47	0.4	222181.13	102.48	60	120	
Ge (IS)	72	He	179728.86	0.3	177648.1	101.17	60	120	
In-115 (IS)	115	He	1844826.86	0.2	1890884.26	97.56	60	120	
Tb-159 (IS)	159	He	6262316.00	0.3	6270485.31	99.87	60	120	

# Sample Report

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<b>Sample Name</b>	440-258875-b-19-a@20
<b>File Name</b>	050SMPL.d
<b>Data Path Name</b>	D:\Agilent\CPMH\1\DATA\200114-2LL.b
<b>Acq Time</b>	2020-01-14 16:53:18
<b>Sample Type</b>	Sample
<b>Total Dilution</b>	1.0000
<b>Comment</b>	CAM SOIL 590297 BHES
<b>Location</b>	4411

**QC Analyte Table**

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	0.553	ppb	3.7	33.00	1000	
Al	27	45	He	15907.525	ppb	1.2	2032468.87	5000	>LDR
V	51	45	He	65.918	ppb	1.0	327268.52	5000	
Cr	52	45	He	16.869	ppb	1.6	106952.08	5000	
Mn	55	45	He	418.866	ppb	1.0	1255457.07	4000	
Fe	56	45	He	25514.487	ppb	1.2	128079981.58	30000	
Co	59	45	He	8.351	ppb	0.9	95662.58	5000	
Ni	60	45	He	11.079	ppb	0.5	35104.97	5000	
Cu	65	45	He	173.411	ppb	1.0	778102.05	5000	
Zn	66	72	He	43.951	ppb	2.0	51063.82	5000	
As	75	72	He	12.291	ppb	1.7	8878.96	5000	
Se	78	72	He	2.666	ppb	13.3	159.67	5000	
Rb	85	115	He	20.295	ppb	1.7	57846.23	100	
Sr	88	115	He	128.283	ppb	0.9	472073.50	5000	
Mo	95	115	He	2.165	ppb	2.4	8924.95	3000	
Ag	107	115	He	0.064	ppb	1.7	956.70	100	
Cd	111	115	He	0.093	ppb	1.7	177.33	5000	
Sn	118	115	He	1.888	ppb	1.4	7478.62	2000	
Sb	121	115	He	0.655	ppb	2.5	2891.42	5000	
Cs	133	115	He	3.296	ppb	1.3	30722.69	100	
Ba	137	115	He	150.072	ppb	0.8	247885.09	5000	
Ce	140	115	He	44.908	ppb	0.6	1279614.18	2000	
Tl	205	159	He	0.152	ppb	1.7	4540.77	5000	
Pb	208	159	He	7.423	ppb	1.1	271764.78	5000	
Th	232	159	He	23.352	ppb	0.8	363393.77	100	
U	238	159	He	2.514	ppb	1.9	91499.61	5000	

**QC ISTD Table**

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	227173.58	0.6	222181.13	102.25	60	120	
Ge (IS)	72	He	178234.78	0.2	177648.1	100.33	60	120	
In-115 (IS)	115	He	1839987.70	0.2	1890884.26	97.31	60	120	
Tb-159 (IS)	159	He	6268420.58	0.1	6270485.31	99.97	60	120	

# Sample Report

Sample Name	440-258875-b-20-a@20
File Name	051SMPL.d
Data Path Name	D:\Agilent\CPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 16:55:22
Sample Type	Sample
Total Dilution	1.0000
Comment	CAM SOIL 590297 BHES
Location	4412

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	0.616	ppb	7.8	36.83	1000	
Al	27	45	He	15357.426	ppb	0.2	1969378.50	5000	>LDR
V	51	45	He	62.186	ppb	0.2	309880.15	5000	
Cr	52	45	He	18.858	ppb	0.8	119898.45	5000	
Mn	55	45	He	382,405	ppb	0.2	1150381.55	4000	
Fe	56	45	He	25523.075	ppb	0.3	128593283.78	30000	
Co	59	45	He	8.588	ppb	0.6	98728.68	5000	
Ni	60	45	He	11.016	ppb	0.6	35032.59	5000	
Cu	65	45	He	291.562	ppb	0.1	1312883.32	5000	
Zn	66	72	He	43.082	ppb	0.6	50399.26	5000	
As	75	72	He	10.606	ppb	1.9	7715.32	5000	
Se	78	72	He	2.041	ppb	8.2	133.67	5000	
Rb	85	115	He	19.165	ppb	0.8	54754.50	100	
Sr	88	115	He	114.013	ppb	0.3	420570.54	5000	
Mo	95	115	He	2.266	ppb	1.6	9361.89	3000	
Ag	107	115	He	0.062	ppb	6.7	931.14	100	
Cd	111	115	He	0.098	ppb	4.3	187.67	5000	
Sn	118	115	He	1.752	ppb	1.4	6972.80	2000	
Sb	121	115	He	0.510	ppb	1.1	2291.30	5000	
Cs	133	115	He	3.079	ppb	0.9	28770.91	100	
Ba	137	115	He	143.663	ppb	0.2	237866.35	5000	
Ce	140	115	He	40.069	ppb	0.4	1144458.50	2000	
Tl	205	159	He	0.130	ppb	1.6	3876.12	5000	
Pb	208	159	He	7.089	ppb	0.6	258246.83	5000	
Th	232	159	He	33.567	ppb	0.3	519608.54	100	
U	238	159	He	2.546	ppb	1.2	92157.97	5000	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	227997.70	0.4	222181.13	102.62	60	120	
Ge (IS)	72	He	179443.71	0.4	177648.1	101.01	60	120	
In-115 (IS)	115	He	1844381.14	0.8	1890884.26	97.54	60	120	
Tb-159 (IS)	159	He	6236000.86	0.5	6270485.31	99.45	60	120	

# Continuing Calibration Verification (CCV) Report

Sample Name	CCV-6043373
File Name	052_CCV.d
Data Path Name	D:\Agilent\CPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 17:02:08
Sample Type	CCV
Total Dilution	1.0000
Comment	—
Location	1206

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Be	9	45	He	49.862	ppb	1.7	2846.59	50	99.72	90	110	
Al	27	45	He	55.880	ppb	2.2	7066.99	50	111.76	90	110	> +/- 10%
V	51	45	He	51.136	ppb	0.5	247943.63	50	102.27	90	110	
Cr	52	45	He	51.242	ppb	0.5	315517.63	50	102.48	90	110	
Mn	55	45	He	51.023	ppb	1.1	149461.33	50	102.05	90	110	
Fe	56	45	He	514.903	ppb	0.7	2531363.79	500	102.98	90	110	
Co	59	45	He	51.169	ppb	0.4	572155.54	50	102.34	90	110	
Ni	60	45	He	51.328	ppb	0.5	158538.16	50	102.66	90	110	
Cu	65	45	He	51.153	ppb	0.8	224284.71	50	102.31	90	110	
Zn	66	72	He	50.763	ppb	2.8	59313.61	50	101.53	90	110	
As	75	72	He	50.412	ppb	1.8	36609.04	50	100.82	90	110	
Se	78	72	He	51.239	ppb	2.8	2260.17	50	102.48	90	110	
Rb	85	115	He	51.289	ppb	0.4	149152.15	50	102.58	90	110	
Sr	88	115	He	51.488	ppb	0.5	193381.54	50	102.98	90	110	
Mo	95	115	He	50.991	ppb	0.7	213854.82	50	101.98	90	110	
Ag	107	115	He	51.643	ppb	0.5	749523.68	50	103.29	90	110	
Cd	111	115	He	50.873	ppb	1.1	94968.34	50	101.75	90	110	
Sn	118	115	He	50.857	ppb	0.2	200387.16	50	101.71	90	110	
Sb	121	115	He	51.453	ppb	0.4	220367.93	50	102.91	90	110	
Cs	133	115	He	51.104	ppb	1.0	485785.76	50	102.21	90	110	
Ba	137	115	He	50.056	ppb	0.7	84392.56	50	100.11	90	110	
Ce	140	115	He	47.517	ppb	0.2	1381567.62	50	95.03	90	110	
Tl	205	159	He	47.291	ppb	1.1	1384658.90	50	94.58	90	110	
Pb	208	159	He	49.661	ppb	0.3	1798586.35	50	99.32	90	110	
Th	232	159	He	1.140	ppb	2.4	17766.17	50	2.28	90	110	> +/- 10%
U	238	159	He	51.089	ppb	0.7	1848191.64	50	102.18	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	221821.33	1.1	222181.13	99.84	60	120	
Ge (IS)	72	He	179389.44	1.0	177648.1	100.98	60	120	
In-115 (IS)	115	He	1877544.36	0.9	1890884.26	99.29	60	120	
Tb-159 (IS)	159	He	6232431.56	0.5	6270485.31	99.39	60	120	

# Continuing Calibration Blank (CCB) Report

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**Sample Name** CCB-6043371  
**File Name** 053\_CCB.d  
**Data Path Name** D:\Agilent\ICPMH\1\DATA\200114-2LL.b  
**Acq Time** 2020-01-14 17:04:12  
**Sample Type** CCB  
**Total Dilution** 1.0000  
**Comment** —  
**Location** 1207

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Be	9	45	He	0.073	ppb	35.9	4.83	0.5	
Al	27	45	He	2.247	ppb	19.1	374.01	10	
V	51	45	He	0.095	ppb	47.3	638.93	1	
Cr	52	45	He	0.072	ppb	47.4	1274.53	1	
Mn	55	45	He	0.097	ppb	56.9	437.80	1	
Fe	56	45	He	3.570	ppb	49.5	24943.37	20	
Co	59	45	He	0.068	ppb	46.7	793.42	1	
Ni	60	45	He	0.074	ppb	41.9	304.46	1	
Cu	65	45	He	0.100	ppb	33.0	660.04	1	
Zn	66	72	He	0.025	ppb	180.4	264.45	20	
As	75	72	He	0.083	ppb	42.3	72.67	1	
Se	78	72	He	0.129	ppb	35.2	50.67	1	
Rb	85	115	He	0.080	ppb	44.0	244.45	1	
Sr	88	115	He	0.076	ppb	32.2	355.57	1	
Mo	95	115	He	0.096	ppb	31.4	431.13	1	
Ag	107	115	He	0.067	ppb	41.3	1022.35	1	
Cd	111	115	He	0.056	ppb	29.5	111.00	1	
Sn	118	115	He	0.078	ppb	20.8	505.58	10	
Sb	121	115	He	0.176	ppb	25.3	897.82	1	
Cs	133	115	He	0.066	ppb	31.5	636.73	1	
Ba	137	115	He	0.088	ppb	36.0	182.23	1	
Ce	140	115	He	0.068	ppb	10.1	2008.37	1	
Tl	205	159	He	0.071	ppb	22.0	2140.66	1	
Pb	208	159	He	0.048	ppb	24.1	3305.03	1	
Th	232	159	He	0.013	ppb	30.7	344.45	1	
U	238	159	He	0.091	ppb	13.1	3298.34	1	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	220646.72	0.8	222181.13	99.31	60	120	
Ge (IS)	72	He	178241.62	0.4	177648.1	100.33	60	120	
In-115 (IS)	115	He	1866609.54	0.3	1890884.26	98.72	60	120	
Tb-159 (IS)	159	He	6214944.20	0.3	6270485.31	99.11	60	120	

## Reporting Limit Check (CRI 2.0x)

Sample Name	CRI-6043375
File Name	054RL_2.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 17:06:25
Sample Type	RL_2
Total Dilution	1.0000
Comment	—
Location	1302

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	%Rec	%Low	%High	QC Flag
Be	9	45	He	1.062	ppb	11.1	61.17	1	106.2	50	150	
Al	27	45	He	20.674	ppb	4.0	2672.91	20	103.37	50	150	
V	51	45	He	1.969	ppb	2.1	9712.02	2	98.45	50	150	
Cr	52	45	He	1.990	ppb	3.0	13055.62	2	99.5	50	150	
Mn	55	45	He	1.996	ppb	1.2	5991.21	2	99.8	50	150	
Fe	56	45	He	39.673	ppb	0.8	201893.78	40	99.18	50	150	
Co	59	45	He	1.952	ppb	1.1	21841.29	2	97.6	50	150	
Ni	60	45	He	2.024	ppb	3.9	6323.57	2	101.2	50	150	
Cu	65	45	He	2.040	ppb	1.8	9157.25	2	102	50	150	
Zn	66	72	He	19.047	ppb	0.9	22100.64	20	95.24	50	150	
As	75	72	He	1.948	ppb	2.0	1408.07	2	97.4	50	150	
Se	78	72	He	2.146	ppb	7.7	136.33	2	107.3	50	150	
Rb	85	115	He	0.953	ppb	3.9	2792.50	1	95.3	50	150	
Sr	88	115	He	2.031	ppb	1.6	7718.69	2	101.55	50	150	
Mo	95	115	He	1.972	ppb	1.3	8321.27	2	98.6	50	150	
Ag	107	115	He	2.063	ppb	1.0	30077.47	2	103.15	50	150	
Cd	111	115	He	1.990	ppb	3.0	3732.14	2	99.5	50	150	
Sn	118	115	He	19.215	ppb	0.9	76038.33	20	96.08	50	150	
Sb	121	115	He	2.077	ppb	2.5	9062.86	2	103.85	50	150	
Cs	133	115	He	0.965	ppb	2.2	9209.65	1	96.5	50	150	
Ba	137	115	He	2.015	ppb	4.7	3440.43	2	100.75	50	150	
Ce	140	115	He	1.927	ppb	0.7	56210.69	2	96.35	50	150	
Tl	205	159	He	1.770	ppb	0.7	52192.04	2	88.5	50	150	
Pb	208	159	He	1.871	ppb	1.0	69676.45	2	93.55	50	150	
Th	232	159	He	1.868	ppb	1.3	29201.49	1	186.8	50	150	RL_2 Main CR1 Failed
U	238	159	He	1.808	ppb	0.7	65800.47	2	90.4	50	150	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	221701.97	1.3	222181.13	99.78	60	120	
Ge (IS)	72	He	176944.14	0.8	177648.1	99.6	60	120	
In-115 (IS)	115	He	1882494.70	1.0	1890884.26	99.56	60	120	
Tb-159 (IS)	159	He	6268020.44	0.9	6270485.31	99.96	60	120	

# Interference Check Solution A (ICS-A) Report

Sample Name	ICSA-6043376
File Name	055ICSA.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 17:08:29
Sample Type	ICSA
Total Dilution	1.0000
Comment	--
Location	1201

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	%Low	%High	QC Flag
Be	9	45	He	0.000	ppb	N/A	0.67	-0.5	100	100	
Al	27	45	He	95273.945	ppb	0.4	12122487.67	-100000	120	100	
V	51	45	He	0.027	ppb	41.6	315.56	-2	100	100	
Cr	52	45	He	0.278	ppb	2.6	2598.01	-2	100	100	
Mn	55	45	He	0.434	ppb	7.5	1453.41	-2	100	100	
Fe	56	45	He	90891.860	ppb	0.4	454319617.51	-100000	120	120	
Co	59	45	He	0.288	ppb	1.3	3321.50	-2	100	100	
Ni	60	45	He	0.295	ppb	7.4	1006.71	-2	100	100	
Cu	65	45	He	0.321	ppb	8.6	1664.55	-2	100	100	
Zn	66	72	He	0.326	ppb	18.0	604.46	-20	100	100	
As	75	72	He	0.072	ppb	3.5	64.00	-2	100	100	
Se	78	72	He	0.335	ppb	46.0	58.67	-2	100	100	
Rb	85	115	He	1.331	ppb	5.5	3722.71	-2	100	100	
Sr	88	115	He	0.840	ppb	2.8	3090.34	-2	100	100	
Mo	95	115	He	2068.005	ppb	0.8	8311871.06	-2000	120	120	
Ag	107	115	He	0.024	ppb	19.0	386.68	-2	100	100	
Cd	111	115	He	0.164	ppb	9.6	300.00	-2	100	100	
Sn	118	115	He	0.344	ppb	7.9	1491.20	-20	100	100	
Sb	121	115	He	0.198	ppb	2.0	952.26	-2	100	100	
Cs	133	115	He	0.025	ppb	28.4	241.12	-2	100	100	
Ba	137	115	He	0.185	ppb	4.7	332.23	-2	100	100	
Ce	140	115	He	0.019	ppb	23.0	561.15	-2	100	100	
Tl	205	159	He	0.012	ppb	6.7	423.36	-2	100	100	
Pb	208	159	He	0.042	ppb	10.1	3087.94	-2	100	100	
Th	232	159	He	0.064	ppb	18.2	1127.83	-2	100	100	
U	238	159	He	0.013	ppb	17.6	476.71	-2	100	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	226222.79	2.8	222181.13	101.82	60	120	
Ge (IS)	72	He	175772.32	1.7	177648.1	98.94	60	120	
In-115 (IS)	115	He	1799819.89	1.8	1890884.26	95.18	60	120	
Tb-159 (IS)	159	He	6199449.20	1.0	6270485.31	98.87	60	120	

# Interference Check Solution AB (ICS-AB) Report

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Sample Name	ICSAB-6043377
File Name	056ICSB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 17:11:54
Sample Type	ICSB
Total Dilution	1.0000
Comment	—
Location	1202

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	%Low	%High	QC Flag
Be	9	45	He	17.331	ppb	3.0	1103.71	20	80	120	
Al	27	45	He	96526.488	ppb	0.4	13432123.00	100000	80	120	
V	51	45	He	18.961	ppb	1.1	102663.80	20	80	120	
Cr	52	45	He	18.573	ppb	0.8	128151.15	20	80	120	
Mn	55	45	He	18.764	ppb	1.6	61422.31	20	80	120	
Fe	56	45	He	90156.551	ppb	0.6	492897882.64	100200	80	120	
Co	59	45	He	18.128	ppb	0.7	226109.81	20	80	120	
Ni	60	45	He	17.527	ppb	1.2	60434.23	20	80	120	
Cu	65	45	He	17.383	ppb	0.5	85178.45	20	80	120	
Zn	66	72	He	18.135	ppb	1.4	22288.68	20	80	120	
As	75	72	He	19.167	ppb	1.3	14544.03	20	80	120	
Se	78	72	He	19.487	ppb	4.7	927.36	20	80	120	
Rb	85	115	He	21.957	ppb	1.5	63666.31	20	80	120	
Sr	88	115	He	21.390	ppb	1.2	80135.56	20	80	120	
Mo	95	115	He	2105.032	ppb	1.5	8799463.54	2020	80	120	
Ag	107	115	He	18.256	ppb	1.1	264199.18	20	80	120	
Cd	111	115	He	18.437	ppb	1.5	34317.32	20	80	120	
Sn	118	115	He	19.471	ppb	0.6	76614.65	20	80	120	
Sb	121	115	He	20.114	ppb	1.7	85963.57	20	80	120	
Cs	133	115	He	19.196	ppb	0.7	181947.01	20	80	120	
Ba	137	115	He	19.305	ppb	1.7	32468.78	20	80	120	
Ce	140	115	He	17.714	ppb	1.9	513453.85	20	80	120	
Tl	205	159	He	16.558	ppb	0.4	482535.43	20	80	120	
Pb	208	159	He	17.286	ppb	0.3	624080.45	20	80	120	
Th	232	159	He	0.386	ppb	2.2	6081.40	20	80	120	> +/- 10%
U	238	159	He	17.326	ppb	0.5	623806.77	20	80	120	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	247434.83	2.2	222181.13	111.37	60	120	
Ge (IS)	72	He	187331.52	1.6	177648.1	105.45	60	120	
In-115 (IS)	115	He	1872048.95	1.8	1890884.26	99	60	120	
Tb-159 (IS)	159	He	6202620.45	0.2	6270485.31	98.92	60	120	

# Sample Report

Sample Name	RINSE
File Name	057SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 17:14:00
Sample Type	Sample
Total Dilution	1.0000
Comment	—
Location	1

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	0.050	ppb	40.4	4.00	1000	
Al	27	45	He	140.477	ppb	11.0	19970.35	5000	
V	51	45	He	0.046	ppb	25.2	454.46	5000	
Cr	52	45	He	0.033	ppb	8.0	1183.39	5000	
Mn	55	45	He	0.024	ppb	21.9	255.56	4000	
Fe	56	45	He	135.002	ppb	5.9	758120.87	30000	
Co	59	45	He	0.024	ppb	18.9	344.46	5000	
Ni	60	45	He	0.022	ppb	11.8	164.45	5000	
Cu	65	45	He	0.022	ppb	42.7	366.68	5000	
Zn	66	72	He	-0.042	ppb	N/A	206.67	5000	
As	75	72	He	0.035	ppb	15.5	42.00	5000	
Se	78	72	He	0.002	ppb	7394.7	50.00	5000	
Rb	85	115	He	0.032	ppb	45.3	112.23	100	
Sr	88	115	He	0.035	ppb	55.5	214.45	5000	
Mo	95	115	He	3.987	ppb	27.7	17854.03	3000	
Ag	107	115	He	0.041	ppb	28.7	683.39	100	
Cd	111	115	He	0.025	ppb	48.2	57.00	5000	
Sn	118	115	He	0.035	ppb	39.7	358.90	2000	
Sb	121	115	He	0.021	ppb	1.7	253.34	5000	
Cs	133	115	He	0.028	ppb	30.1	296.68	100	
Ba	137	115	He	0.013	ppb	43.2	61.11	5000	
Ce	140	115	He	0.026	ppb	33.0	860.12	2000	
Tl	205	159	He	0.030	ppb	45.5	972.38	5000	
Pb	208	159	He	-0.008	ppb	N/A	1307.86	5000	
Th	232	159	He	0.002	ppb	107.1	178.89	100	
U	238	159	He	0.026	ppb	21.7	976.83	5000	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	251285.06	1.1	222181.13	113.1	60	120	
Ge (IS)	72	He	196978.52	1.0	177648.1	110.88	60	120	
In-115 (IS)	115	He	1998949.60	0.7	1890884.26	105.72	60	120	
Tb-159 (IS)	159	He	6357759.05	1.1	6270485.31	101.39	60	120	

# Sample Report

Sample Name	RINSE
File Name	058SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 17:16:11
Sample Type	Sample
Total Dilution	1.0000
Comment	—
Location	1

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	0.013	ppb	63.2	1.50	1000	
Al	27	45	He	38.506	ppb	31.8	5324.41	5000	
V	51	45	He	0.032	ppb	44.6	365.56	5000	
Cr	52	45	He	0.018	ppb	107.2	1033.38	5000	
Mn	55	45	He	0.004	ppb	315.5	180.00	4000	
Fe	56	45	He	49.979	ppb	57.4	274294.98	30000	
Co	59	45	He	0.008	ppb	93.9	135.56	5000	
Ni	60	45	He	0.009	ppb	115.1	113.33	5000	
Cu	65	45	He	0.005	ppb	125.8	267.78	5000	
Zn	66	72	He	-0.090	ppb	N/A	140.00	5000	
As	75	72	He	0.011	ppb	30.6	22.67	5000	
Se	78	72	He	-0.159	ppb	N/A	41.00	5000	
Rb	85	115	He	0.004	ppb	36.7	24.45	100	
Sr	88	115	He	0.008	ppb	126.2	105.55	5000	
Mo	95	115	He	1.091	ppb	13.0	4805.71	3000	
Ag	107	115	He	0.011	ppb	18.5	214.45	100	
Cd	111	115	He	0.008	ppb	12.6	23.00	5000	
Sn	118	115	He	0.013	ppb	47.1	262.23	2000	
Sb	121	115	He	0.001	ppb	837.3	157.78	5000	
Cs	133	115	He	0.009	ppb	50.6	104.44	100	
Ba	137	115	He	-0.001	ppb	N/A	35.55	5000	
Ce	140	115	He	0.008	ppb	48.0	285.57	2000	
Tl	205	159	He	0.008	ppb	54.9	290.01	5000	
Pb	208	159	He	-0.031	ppb	N/A	468.90	5000	
Th	232	159	He	0.005	ppb	132.9	216.67	100	
U	238	159	He	0.008	ppb	24.1	323.36	5000	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	240753.25	1.1	222181.13	108.36	60	120	
Ge (IS)	72	He	190728.29	0.8	177648.1	107.36	60	120	
In-115 (IS)	115	He	1959488.99	0.3	1890884.26	103.63	60	120	
Tb-159 (IS)	159	He	6322162.94	0.8	6270485.31	100.82	60	120	

# Sample Report

Sample Name	RINSE
File Name	059SMPL.d
Data Path Name	D:\Agilent\CPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 17:18:16
Sample Type	Sample
Total Dilution	1.0000
Comment	—
Location	1

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	0.002	ppb	238.7	0.83	1000	
Al	27	45	He	9.273	ppb	21.5	1340.21	5000	
V	51	45	He	0.025	ppb	33.4	324.45	5000	
Cr	52	45	He	0.006	ppb	73.6	941.15	5000	
Mn	55	45	He	-0.012	ppb	N/A	130.00	4000	
Fe	56	45	He	12.327	ppb	44.2	72716.28	30000	
Co	59	45	He	0.001	ppb	170.5	47.78	5000	
Ni	60	45	He	0.001	ppb	277.1	85.56	5000	
Cu	65	45	He	-0.001	ppb	N/A	235.56	5000	
Zn	66	72	He	-0.051	ppb	N/A	187.78	5000	
As	75	72	He	0.004	ppb	16.2	16.67	5000	
Se	78	72	He	0.085	ppb	237.8	52.00	5000	
Rb	85	115	He	0.002	ppb	93.7	21.11	100	
Sr	88	115	He	0.002	ppb	415.7	82.22	5000	
Mo	95	115	He	0.391	ppb	15.4	1739.44	3000	
Ag	107	115	He	0.004	ppb	43.1	117.78	100	
Cd	111	115	He	-0.001	ppb	N/A	5.67	5000	
Sn	118	115	He	0.006	ppb	63.9	232.23	2000	
Sb	121	115	He	-0.013	ppb	N/A	96.67	5000	
Cs	133	115	He	0.000	ppb	216.8	22.22	100	
Ba	137	115	He	-0.011	ppb	N/A	17.78	5000	
Ce	140	115	He	0.002	ppb	33.2	98.89	2000	
Tl	205	159	He	0.001	ppb	79.1	103.33	5000	
Pb	208	159	He	-0.035	ppb	N/A	331.12	5000	
Th	232	159	He	0.003	ppb	210.3	185.56	100	
U	238	159	He	0.002	ppb	74.9	96.67	5000	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	237543.71	1.3	222181.13	106.91	60	120	
Ge (IS)	72	He	190190.64	1.4	177648.1	107.06	60	120	
In-115 (IS)	115	He	1956855.79	1.0	1890884.26	103.49	60	120	
Tb-159 (IS)	159	He	6339279.61	1.1	6270485.31	101.1	60	120	

# Continuing Calibration Verification (CCV) Report

Sample Name	CCV-6043373
File Name	060_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 17:20:20
Sample Type	CCV
Total Dilution	1.0000
Comment	—
Location	1206

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Be	9	45	He	47.817	ppb	0.7	2902.44	50	95.63	90	110	
Al	27	45	He	55.477	ppb	1.9	7461.84	50	110.95	90	110	> +/- 10%
V	51	45	He	50.385	ppb	0.1	259787.92	50	100.77	90	110	
Cr	52	45	He	50.252	ppb	1.0	329043.92	50	100.5	90	110	
Mn	55	45	He	50.286	ppb	0.4	156646.89	50	100.57	90	110	
Fe	56	45	He	505.981	ppb	0.9	2645248.92	500	101.2	90	110	
Co	59	45	He	50.185	ppb	0.2	596710.55	50	100.37	90	110	
Ni	60	45	He	50.004	ppb	0.5	164233.31	50	100.01	90	110	
Cu	65	45	He	49.445	ppb	0.4	230538.09	50	98.89	90	110	
Zn	66	72	He	50.727	ppb	1.3	62036.70	50	101.45	90	110	
As	75	72	He	50.617	ppb	0.9	38470.66	50	101.23	90	110	
Se	78	72	He	50.495	ppb	1.2	2331.85	50	100.99	90	110	
Rb	85	115	He	52.063	ppb	0.6	157025.63	50	104.13	90	110	
Sr	88	115	He	51.531	ppb	0.3	200730.77	50	103.06	90	110	
Mo	95	115	He	50.762	ppb	0.3	220792.98	50	101.52	90	110	
Ag	107	115	He	50.888	ppb	0.2	766008.77	50	101.78	90	110	
Cd	111	115	He	50.422	ppb	0.4	97625.23	50	100.84	90	110	
Sn	118	115	He	50.827	ppb	0.4	207707.02	50	101.65	90	110	
Sb	121	115	He	51.116	ppb	0.9	227054.44	50	102.23	90	110	
Cs	133	115	He	50.466	ppb	0.6	497549.25	50	100.93	90	110	
Ba	137	115	He	50.022	ppb	0.5	87467.49	50	100.04	90	110	
Ce	140	115	He	46.819	ppb	0.7	1411786.30	50	93.64	90	110	
Tl	205	159	He	46.906	ppb	0.6	1396540.85	50	93.81	90	110	
Pb	208	159	He	49.104	ppb	0.6	1808380.16	50	98.21	90	110	
Th	232	159	He	1.128	ppb	1.4	17887.40	50	2.26	90	110	> +/- 10%
U	238	159	He	49.980	ppb	1.0	1838549.14	50	99.96	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	235876.64	0.6	222181.13	106.16	60	120	
Ge (IS)	72	He	187733.40	1.1	177648.1	105.68	60	120	
In-115 (IS)	115	He	1947262.37	0.7	1890884.26	102.98	60	120	
Tb-159 (IS)	159	He	6337339.05	0.2	6270485.31	101.07	60	120	

# Continuing Calibration Blank (CCB) Report

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**Sample Name** CCB-6043371  
**File Name** 061\_CCB.d  
**Data Path Name** D:\Agilent\ICPMH\1\DATA\200114-2LL.b  
**Acq Time** 2020-01-14 17:22:24  
**Sample Type** CCB  
**Total Dilution** 1.0000  
**Comment** —  
**Location** 1207

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Be	9	45	He	0.088	ppb	39.0	5.83	0.5	
Al	27	45	He	1.952	ppb	15.8	348.68	10	
V	51	45	He	0.089	ppb	31.2	626.69	1	
Cr	52	45	He	0.058	ppb	17.8	1232.29	1	
Mn	55	45	He	0.038	ppb	92.3	272.23	1	
Fe	56	45	He	2.008	ppb	72.2	17831.69	20	
Co	59	45	He	0.057	ppb	53.4	694.51	1	
Ni	60	45	He	0.041	ppb	42.7	210.01	1	
Cu	65	45	He	0.050	ppb	15.2	457.79	1	
Zn	66	72	He	-0.007	ppb	N/A	233.34	20	
As	75	72	He	0.075	ppb	38.7	69.00	1	
Se	78	72	He	0.306	ppb	31.0	60.00	1	
Rb	85	115	He	0.081	ppb	52.2	252.23	1	
Sr	88	115	He	0.084	ppb	55.4	393.35	1	
Mo	95	115	He	0.216	ppb	21.3	947.86	1	
Ag	107	115	He	0.110	ppb	34.1	1665.88	1	
Cd	111	115	He	0.103	ppb	34.4	202.01	1	
Sn	118	115	He	0.117	ppb	26.4	670.04	10	
Sb	121	115	He	0.215	ppb	5.4	1080.07	1	
Cs	133	115	He	0.088	ppb	19.3	868.99	1	
Ba	137	115	He	0.091	ppb	23.4	191.12	1	
Ce	140	115	He	0.076	ppb	29.3	2278.55	1	
Tl	205	159	He	0.072	ppb	34.1	2180.59	1	
Pb	208	159	He	0.044	ppb	56.5	3184.91	1	
Th	232	159	He	0.006	ppb	112.2	228.89	1	
U	238	159	He	0.073	ppb	29.4	2671.35	1	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	227804.09	0.8	222181.13	102.53	60	120	
Ge (IS)	72	He	183426.75	1.0	177648.1	103.25	60	120	
In-115 (IS)	115	He	1902210.52	0.2	1890884.26	100.6	60	120	
Tb-159 (IS)	159	He	6263795.86	0.2	6270485.31	99.89	60	120	

# Method Blank (MB) Report

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Sample Name	mb 440-590384_1-a@20
File Name	062_PB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 17:24:39
Sample Type	MB
Total Dilution	1.0000
Comment	CAM SOIL 440-590384 ES
Location	3101

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Be	9	45	He	0.032	ppb	0.8	2.50	0.5	
Al	27	45	He	27.290	ppb	2.7	3549.75	10	MB Main CR1 Failed
V	51	45	He	0.061	ppb	4.3	481.12	1	
Cr	52	45	He	0.077	ppb	15.2	1332.29	1	
Mn	55	45	He	0.149	ppb	4.7	600.02	1	
Fe	56	45	He	4.402	ppb	4.3	29524.27	20	
Co	59	45	He	0.024	ppb	23.4	312.24	1	
Ni	60	45	He	0.080	ppb	9.6	326.67	1	
Cu	65	45	He	0.483	ppb	2.8	2371.31	1	
Zn	66	72	He	2.571	ppb	1.2	3237.03	20	
As	75	72	He	0.027	ppb	53.0	32.67	1	
Se	78	72	He	0.187	ppb	90.3	53.67	1	
Rb	85	115	He	0.026	ppb	36.8	87.78	1	
Sr	88	115	He	0.045	ppb	23.6	242.23	1	
Mo	95	115	He	0.107	ppb	11.3	482.25	1	
Ag	107	115	He	0.037	ppb	20.5	591.15	1	
Cd	111	115	He	0.047	ppb	18.4	95.67	1	
Sn	118	115	He	0.619	ppb	6.0	2642.48	10	
Sb	121	115	He	0.054	ppb	18.5	377.79	1	
Cs	133	115	He	0.023	ppb	46.1	236.68	1	
Ba	137	115	He	0.140	ppb	5.3	272.23	1	
Ce	140	115	He	0.020	ppb	38.5	635.63	1	
Tl	205	159	He	0.019	ppb	38.9	620.07	1	
Pb	208	159	He	0.007	ppb	84.4	1850.09	1	
Th	232	159	He	0.005	ppb	109.5	211.11	1	
U	238	159	He	0.020	ppb	21.2	743.45	1	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	224934.95	0.6	222181.13	101.24	60	120	
Ge (IS)	72	He	179802.28	1.1	177648.1	101.21	60	120	
In-115 (IS)	115	He	1880606.12	0.7	1890884.26	99.46	60	120	
Tb-159 (IS)	159	He	6211544.89	0.4	6270485.31	99.06	60	120	

# Sample Report

Sample Name	Ics 440-590384_2-a@20
File Name	063SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 17:26:43
Sample Type	Sample
Total Dilution	1.0000
Comment	CAM SOIL 440-590384 ES
Location	3102

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	89.295	ppb	1.2	5135.51	1000	
Al	27	45	He	94.942	ppb	1.1	12031.34	5000	
V	51	45	He	90.897	ppb	0.5	443962.74	5000	
Cr	52	45	He	91.734	ppb	0.3	568479.13	5000	
Mn	55	45	He	91.156	ppb	0.2	268948.14	4000	
Fe	56	45	He	98.136	ppb	0.7	492271.84	30000	
Co	59	45	He	91.800	ppb	0.2	1034272.42	5000	
Ni	60	45	He	91.605	ppb	0.3	285036.58	5000	
Cu	65	45	He	94.199	ppb	0.5	415980.43	5000	
Zn	66	72	He	91.440	ppb	1.2	107110.13	5000	
As	75	72	He	91.125	ppb	0.9	66444.97	5000	
Se	78	72	He	89.784	ppb	1.5	3943.19	5000	
Rb	85	115	He	0.022	ppb	11.7	77.78	100	
Sr	88	115	He	93.200	ppb	0.2	347807.68	5000	
Mo	95	115	He	90.664	ppb	1.0	377827.01	3000	
Ag	107	115	He	48.009	ppb	0.3	692446.47	100	
Cd	111	115	He	91.825	ppb	0.7	170346.09	5000	
Sn	118	115	He	92.928	ppb	0.2	363709.82	2000	
Sb	121	115	He	94.557	ppb	0.6	402315.78	5000	
Cs	133	115	He	0.009	ppb	13.3	102.22	100	
Ba	137	115	He	94.004	ppb	0.3	157467.96	5000	
Ce	140	115	He	0.021	ppb	10.9	645.58	2000	
Tl	205	159	He	90.142	ppb	1.0	2633085.94	5000	
Pb	208	159	He	91.578	ppb	0.3	3307672.12	5000	
Th	232	159	He	0.025	ppb	35.3	522.23	100	
U	238	159	He	0.015	ppb	12.8	553.36	5000	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	223513.08	0.1	222181.13	100.6	60	120	
Ge (IS)	72	He	180133.50	0.6	177648.1	101.4	60	120	
In-115 (IS)	115	He	1865821.54	0.3	1890884.26	98.67	60	120	
Tb-159 (IS)	159	He	6217858.23	0.4	6270485.31	99.16	60	120	

# Sample Report

Sample Name	440-258909-b-1-a@20
File Name	064SMPL.d
Data Path Name	D:\Agilent\CPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 17:28:47
Sample Type	Sample
Total Dilution	1.0000
Comment	CAM SOIL 440-590384 ES
Location	3103

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	0.544	ppb	9.6	33.17	1000	
Al	27	45	He	16356.516	ppb	0.3	2133515.75	5000	>LDR
V	51	45	He	37.529	ppb	1.2	190300.66	5000	
Cr	52	45	He	12.195	ppb	0.4	79180.99	5000	
Mn	55	45	He	76.556	ppb	0.3	234388.24	4000	
Fe	56	45	He	21449.852	ppb	0.5	109928382.30	30000	
Co	59	45	He	7.356	ppb	0.9	86025.72	5000	
Ni	60	45	He	11.592	ppb	1.7	37497.37	5000	
Cu	65	45	He	1663.585	ppb	0.8	7618620.25	5000	
Zn	66	72	He	15.993	ppb	1.2	19332.39	5000	
As	75	72	He	11.694	ppb	1.6	8719.20	5000	
Se	78	72	He	5.063	ppb	7.4	271.00	5000	
Rb	85	115	He	6.151	ppb	1.9	17846.28	100	
Sr	88	115	He	119.115	ppb	0.5	445997.43	5000	
Mo	95	115	He	6.864	ppb	0.5	28732.35	3000	
Ag	107	115	He	0.165	ppb	6.0	2440.31	100	
Cd	111	115	He	0.176	ppb	10.5	334.01	5000	
Sn	118	115	He	2.462	ppb	1.0	9863.43	2000	
Sb	121	115	He	1.577	ppb	6.7	6876.16	5000	
Cs	133	115	He	0.902	ppb	0.9	8570.35	100	
Ba	137	115	He	64.929	ppb	0.2	109142.97	5000	
Ce	140	115	He	21.459	ppb	0.9	622158.88	2000	
Tl	205	159	He	0.250	ppb	11.1	7396.33	5000	
Pb	208	159	He	5.142	ppb	1.4	187770.93	5000	
Th	232	159	He	19.630	ppb	1.2	303956.41	100	
U	238	159	He	10.981	ppb	1.2	397536.43	5000	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	231918.12	0.7	222181.13	104.38	60	120	
Ge (IS)	72	He	183949.19	0.5	177648.1	103.55	60	120	
In-115 (IS)	115	He	1872160.09	0.6	1890884.26	99.01	60	120	
Tb-159 (IS)	159	He	6236962.81	1.0	6270485.31	99.47	60	120	

# Sample Report

<b>Sample Name</b>	440-258909-b-1-b ms@20
<b>File Name</b>	065SMPL.d
<b>Data Path Name</b>	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
<b>Acq Time</b>	2020-01-14 17:30:51
<b>Sample Type</b>	Sample
<b>Total Dilution</b>	1.0000
<b>Comment</b>	CAM SOIL 440-590384 ES
<b>Location</b>	3104

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	86.523	ppb	1.1	5175.51	1000	
Al	27	45	He	21497.810	ppb	0.6	2810798.25	5000	>LDR
V	51	45	He	132.502	ppb	0.5	673014.07	5000	
Cr	52	45	He	100.195	ppb	0.7	645712.84	5000	
Mn	55	45	He	166.646	ppb	0.3	511232.79	4000	
Fe	56	45	He	22819.646	ppb	0.7	117227226.45	30000	
Co	59	45	He	95.219	ppb	0.5	1115779.19	5000	
Ni	60	45	He	98.705	ppb	0.5	319428.30	5000	
Cu	65	45	He	1781.017	ppb	0.5	8175844.67	5000	
Zn	66	72	He	102.263	ppb	0.1	122010.68	5000	
As	75	72	He	101.431	ppb	0.4	75346.31	5000	
Se	78	72	He	96.030	ppb	2.1	4292.95	5000	
Rb	85	115	He	7.000	ppb	1.8	20114.71	100	
Sr	88	115	He	237.693	ppb	0.7	881442.64	5000	
Mo	95	115	He	96.000	ppb	0.5	397604.00	3000	
Ag	107	115	He	47.409	ppb	0.6	679569.21	100	
Cd	111	115	He	91.092	ppb	0.4	167947.49	5000	
Sn	118	115	He	92.376	ppb	0.7	359315.57	2000	
Sb	121	115	He	63.769	ppb	0.6	269697.29	5000	
Cs	133	115	He	1.032	ppb	1.6	9699.97	100	
Ba	137	115	He	164.135	ppb	0.5	273222.98	5000	
Ce	140	115	He	24.016	ppb	0.4	689670.09	2000	
Tl	205	159	He	89.210	ppb	1.6	2600079.62	5000	
Pb	208	159	He	94.432	ppb	0.8	3403047.83	5000	
Th	232	159	He	19.616	ppb	0.6	302148.78	100	
U	238	159	He	11.704	ppb	1.5	421466.66	5000	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	232464.95	0.4	222181.13	104.63	60	120	
Ge (IS)	72	He	183510.80	0.6	177648.1	103.3	60	120	
In-115 (IS)	115	He	1854352.47	0.8	1890884.26	98.07	60	120	
Tb-159 (IS)	159	He	6204114.20	0.7	6270485.31	98.94	60	120	

# Sample Report

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Sample Name	440-258909-b-1-c msd@20
File Name	066SMPL.d
Data Path Name	D:\Agilent\CPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 17:33:00
Sample Type	Sample
Total Dilution	1.0000
Comment	CAM SOIL 440-590384 ES
Location	3105

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	88.117	ppb	0.3	5238.37	1000	
Al	27	45	He	22088.861	ppb	0.4	2870271.25	5000	>LDR
V	51	45	He	134.390	ppb	0.7	678391.22	5000	
Cr	52	45	He	102.389	ppb	0.2	655759.96	5000	
Mn	55	45	He	171.465	ppb	0.6	522772.50	4000	
Fe	56	45	He	23100.342	ppb	0.4	117937075.31	30000	
Co	59	45	He	97.007	ppb	0.2	1129720.30	5000	
Ni	60	45	He	100.730	ppb	0.2	323967.28	5000	
Cu	65	45	He	1842.837	ppb	0.3	8407494.11	5000	
Zn	66	72	He	103.273	ppb	0.5	122033.31	5000	
As	75	72	He	102.615	ppb	1.0	75495.41	5000	
Se	78	72	He	95.570	ppb	2.6	4231.60	5000	
Rb	85	115	He	8.099	ppb	1.2	23176.89	100	
Sr	88	115	He	241.603	ppb	0.8	892265.73	5000	
Mo	95	115	He	98.811	ppb	0.2	407561.26	3000	
Ag	107	115	He	48.146	ppb	0.3	687309.78	100	
Cd	111	115	He	92.159	ppb	0.4	169214.39	5000	
Sn	118	115	He	92.996	ppb	0.4	360246.26	2000	
Sb	121	115	He	62.268	ppb	0.5	262269.61	5000	
Cs	133	115	He	1.045	ppb	1.6	9784.47	100	
Ba	137	115	He	168.012	ppb	1.0	278526.57	5000	
Ce	140	115	He	25.664	ppb	0.7	733956.05	2000	
Tl	205	159	He	89.564	ppb	0.4	2607048.65	5000	
Pb	208	159	He	96.420	ppb	0.2	3470170.28	5000	
Th	232	159	He	20.276	ppb	0.2	311899.91	100	
U	238	159	He	11.222	ppb	1.4	403600.28	5000	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	231034.36	0.4	222181.13	103.98	60	120	
Ge (IS)	72	He	181755.43	0.6	177648.1	102.31	60	120	
In-115 (IS)	115	He	1846708.21	0.3	1890884.26	97.66	60	120	
Tb-159 (IS)	159	He	6195910.31	0.2	6270485.31	98.81	60	120	

# Sample Report

Sample Name	440-258909-b-1-a PDS@20
File Name	067SMPL.d
Data Path Name	D:\Agilent\CPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 17:35:05
Sample Type	Sample
Total Dilution	1.0000
Comment	CAM SOIL 440-590384 ES
Location	3106

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	92.309	ppb	1.4	5434.77	1000	
Al	27	45	He	16069.748	ppb	1.2	2068090.25	5000	>LDR
V	51	45	He	132.047	ppb	0.9	660164.56	5000	
Cr	52	45	He	106.196	ppb	1.0	673576.81	5000	
Mn	55	45	He	169.174	ppb	1.1	510833.52	4000	
Fe	56	45	He	21958.538	ppb	1.2	111030428.92	30000	
Co	59	45	He	100.758	ppb	1.0	1162134.68	5000	
Ni	60	45	He	104.121	ppb	1.3	331655.04	5000	
Cu	65	45	He	1718.199	ppb	1.3	7763477.75	5000	
Zn	66	72	He	107.473	ppb	0.2	126761.74	5000	
As	75	72	He	107.683	ppb	0.9	79082.31	5000	
Se	78	72	He	100.926	ppb	1.6	4459.00	5000	
Rb	85	115	He	105.762	ppb	0.5	302735.29	100	>LDR
Sr	88	115	He	217.497	ppb	0.3	803883.76	5000	
Mo	95	115	He	106.538	ppb	0.4	439769.60	3000	
Ag	107	115	He	98.673	ppb	0.4	1409673.03	100	>LDR
Cd	111	115	He	97.183	ppb	0.4	178578.75	5000	
Sn	118	115	He	101.162	ppb	0.3	392174.02	2000	
Sb	121	115	He	102.151	ppb	0.6	430511.76	5000	
Cs	133	115	He	99.019	ppb	0.3	926558.61	100	
Ba	137	115	He	162.589	ppb	0.1	269753.16	5000	
Ce	140	115	He	117.920	ppb	0.5	3374924.52	2000	
Tl	205	159	He	95.009	ppb	0.4	2800885.86	5000	
Pb	208	159	He	100.130	ppb	0.5	3649724.11	5000	
Th	232	159	He	21.489	ppb	0.2	334787.69	100	
U	238	159	He	107.128	ppb	0.7	3902103.90	5000	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	228820.84	0.4	222181.13	102.99	60	120	
Ge (IS)	72	He	181431.25	0.7	177648.1	102.13	60	120	
In-115 (IS)	115	He	1848148.13	0.6	1890884.26	97.74	60	120	
Tb-159 (IS)	159	He	6275160.31	0.5	6270485.31	100.07	60	120	

# Sample Report

<b>Sample Name</b>	440-258909-b-1-a SD@100
<b>File Name</b>	068SMPL.d
<b>Data Path Name</b>	D:\Agilent\CPMH\1\DATA\200114-2LL.b
<b>Acq Time</b>	2020-01-14 17:52:40
<b>Sample Type</b>	Sample
<b>Total Dilution</b>	1.0000
<b>Comment</b>	CAM SOIL 440-590384 ES
<b>Location</b>	3107

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	0.086	ppb	40.1	5.83	1000	
Al	27	45	He	3120.850	ppb	0.5	407933.43	5000	
V	51	45	He	7.371	ppb	0.7	37596.20	5000	
Cr	52	45	He	2.435	ppb	1.6	16542.34	5000	
Mn	55	45	He	15.266	ppb	1.7	46956.60	4000	
Fe	56	45	He	4301.621	ppb	1.0	22093210.79	30000	
Co	59	45	He	1.449	ppb	0.5	17002.88	5000	
Ni	60	45	He	2.355	ppb	2.4	7694.20	5000	
Cu	65	45	He	323.038	ppb	3.5	1482395.01	5000	
Zn	66	72	He	3.767	ppb	0.9	4777.44	5000	
As	75	72	He	2.314	ppb	2.9	1749.77	5000	
Se	78	72	He	1.212	ppb	42.7	101.00	5000	
Rb	85	115	He	1.160	ppb	3.8	3478.20	100	
Sr	88	115	He	22.919	ppb	0.5	88453.30	5000	
Mo	95	115	He	1.321	ppb	2.0	5723.35	3000	
Ag	107	115	He	0.018	ppb	12.2	327.78	100	
Cd	111	115	He	0.006	ppb	41.2	19.67	5000	
Sn	118	115	He	0.475	ppb	5.6	2126.83	2000	
Sb	121	115	He	0.312	ppb	10.8	1522.31	5000	
Cs	133	115	He	0.170	ppb	6.6	1678.99	100	
Ba	137	115	He	12.367	ppb	1.3	21440.44	5000	
Ce	140	115	He	4.130	ppb	0.8	123381.27	2000	
Tl	205	159	He	0.020	ppb	1.5	652.24	5000	
Pb	208	159	He	0.947	ppb	1.4	36707.26	5000	
Th	232	159	He	3.643	ppb	0.8	57809.74	100	
U	238	159	He	2.131	ppb	1.9	78910.52	5000	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	232359.53	0.7	222181.13	104.58	60	120	
Ge (IS)	72	He	185439.94	0.7	177648.1	104.39	60	120	
In-115 (IS)	115	He	1928367.91	0.5	1890884.26	101.98	60	120	
Tb-159 (IS)	159	He	6379357.11	0.6	6270485.31	101.74	60	120	

# Continuing Calibration Verification (CCV) Report

Sample Name	CCV-6043373
File Name	069_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 17:54:45
Sample Type	CCV
Total Dilution	1.0000
Comment	—
Location	1206

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Be	9	45	He	49.017	ppb	1.2	2932.94	50	98.03	90	110	
Al	27	45	He	55.556	ppb	2.6	7365.82	50	111.11	90	110	> +/- 10%
V	51	45	He	50.206	ppb	0.9	255178.75	50	100.41	90	110	
Cr	52	45	He	50.271	ppb	0.6	324477.12	50	100.54	90	110	
Mn	55	45	He	49.728	ppb	1.4	152704.17	50	99.46	90	110	
Fe	56	45	He	503.244	ppb	1.4	2593524.83	500	100.65	90	110	
Co	59	45	He	50.254	ppb	0.4	589012.48	50	100.51	90	110	
Ni	60	45	He	50.223	ppb	0.8	162602.66	50	100.45	90	110	
Cu	65	45	He	50.271	ppb	1.0	231039.89	50	100.54	90	110	
Zn	66	72	He	49.614	ppb	0.8	60246.21	50	99.23	90	110	
As	75	72	He	49.992	ppb	0.2	37723.11	50	99.98	90	110	
Se	78	72	He	50.652	ppb	1.6	2322.18	50	101.3	90	110	
Rb	85	115	He	51.303	ppb	0.4	153942.60	50	102.61	90	110	
Sr	88	115	He	50.775	ppb	0.5	196775.51	50	101.55	90	110	
Mo	95	115	He	50.430	ppb	0.3	218228.79	50	100.86	90	110	
Ag	107	115	He	51.007	ppb	0.4	763869.59	50	102.01	90	110	
Cd	111	115	He	50.406	ppb	0.7	97092.79	50	100.81	90	110	
Sn	118	115	He	50.514	ppb	0.8	205367.80	50	101.03	90	110	
Sb	121	115	He	51.216	ppb	0.9	226326.42	50	102.43	90	110	
Cs	133	115	He	50.169	ppb	0.6	492084.58	50	100.34	90	110	
Ba	137	115	He	49.648	ppb	0.6	86367.44	50	99.3	90	110	
Ce	140	115	He	46.761	ppb	0.3	1402878.97	50	93.52	90	110	
Tl	205	159	He	46.643	ppb	0.9	1403986.09	50	93.29	90	110	
Pb	208	159	He	48.701	ppb	0.2	1813345.63	50	97.4	90	110	
Th	232	159	He	1.267	ppb	3.9	20293.02	50	2.53	90	110	> +/- 10%
U	238	159	He	49.865	ppb	1.0	1854500.81	50	99.73	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	232511.31	0.5	222181.13	104.65	60	120	
Ge (IS)	72	He	186376.69	0.5	177648.1	104.91	60	120	
In-115 (IS)	115	He	1937305.91	0.7	1890884.26	102.46	60	120	
Tb-159 (IS)	159	He	6407286.41	0.6	6270485.31	102.18	60	120	

# Continuing Calibration Blank (CCB) Report

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**Sample Name** CCB-6043371  
**File Name** 070\_CCB.d  
**Data Path Name** D:\Agilent\ICPMH\1\DATA\200114-2LL.b  
**Acq Time** 2020-01-14 17:56:49  
**Sample Type** CCB  
**Total Dilution** 1.0000  
**Comment** —  
**Location** 1207

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Be	9	45	He	0.117	ppb	6.6	7.50	0.5	
Al	27	45	He	1.638	ppb	33.4	307.34	10	
V	51	45	He	0.085	ppb	11.9	604.47	1	
Cr	52	45	He	0.079	ppb	20.5	1354.53	1	
Mn	55	45	He	0.061	ppb	18.9	340.02	1	
Fe	56	45	He	2.093	ppb	17.2	18203.93	20	
Co	59	45	He	0.073	ppb	12.0	865.72	1	
Ni	60	45	He	0.083	ppb	20.1	341.13	1	
Cu	65	45	He	0.299	ppb	6.4	1571.47	1	
Zn	66	72	He	0.048	ppb	50.4	298.89	20	
As	75	72	He	0.085	ppb	13.3	76.33	1	
Se	78	72	He	0.067	ppb	501.6	49.33	1	
Rb	85	115	He	0.066	ppb	18.3	207.79	1	
Sr	88	115	He	0.070	ppb	16.9	338.91	1	
Mo	95	115	He	0.105	ppb	16.3	474.46	1	
Ag	107	115	He	0.078	ppb	39.2	1191.41	1	
Cd	111	115	He	0.055	ppb	10.6	111.67	1	
Sn	118	115	He	0.082	ppb	14.2	528.92	10	
Sb	121	115	He	0.198	ppb	11.3	1006.73	1	
Cs	133	115	He	0.067	ppb	22.3	658.98	1	
Ba	137	115	He	0.065	ppb	29.4	146.67	1	
Ce	140	115	He	0.077	ppb	6.2	2307.73	1	
Tl	205	159	He	0.078	ppb	4.0	2387.89	1	
Pb	208	159	He	0.048	ppb	18.5	3368.67	1	
Th	232	159	He	0.009	ppb	41.2	278.89	1	
U	238	159	He	0.092	ppb	26.9	3402.73	1	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	226829.06	0.8	222181.13	102.09	60	120	
Ge (IS)	72	He	182955.59	0.5	177648.1	102.99	60	120	
In-115 (IS)	115	He	1896761.46	0.2	1890884.26	100.31	60	120	
Tb-159 (IS)	159	He	6326482.53	0.4	6270485.31	100.89	60	120	

# Sample Report

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<b>Sample Name</b>	440-258909-b-2-a@20
<b>File Name</b>	071SMPL.d
<b>Data Path Name</b>	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
<b>Acq Time</b>	2020-01-14 18:12:31
<b>Sample Type</b>	Sample
<b>Total Dilution</b>	1.0000
<b>Comment</b>	CAM SOIL 440-590384 ES
<b>Location</b>	3108

**QC Analyte Table**

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	0.268	ppb	25.9	16.50	1000	
Al	27	45	He	10854.882	ppb	0.5	1400707.79	5000	>LDR
V	51	45	He	42.246	ppb	0.8	211890.75	5000	
Cr	52	45	He	18.946	ppb	0.3	121207.76	5000	
Mn	55	45	He	94.452	ppb	0.4	286033.62	4000	
Fe	56	45	He	30854.314	ppb	0.3	156425082.68	30000	>LDR
Co	59	45	He	6.612	ppb	0.3	76498.20	5000	
Ni	60	45	He	14.100	ppb	0.9	45100.13	5000	
Cu	65	45	He	893.845	ppb	0.4	4049681.51	5000	
Zn	66	72	He	29.267	ppb	1.5	34679.73	5000	
As	75	72	He	5.706	ppb	1.6	4201.26	5000	
Se	78	72	He	4.113	ppb	4.0	225.67	5000	
Rb	85	115	He	14.620	ppb	0.5	42149.43	100	
Sr	88	115	He	58.380	ppb	1.3	217293.07	5000	
Mo	95	115	He	5.388	ppb	0.3	22422.56	3000	
Ag	107	115	He	0.159	ppb	3.4	2332.42	100	
Cd	111	115	He	0.026	ppb	22.5	55.33	5000	
Sn	118	115	He	2.396	ppb	0.1	9547.61	2000	
Sb	121	115	He	0.700	ppb	5.4	3113.68	5000	
Cs	133	115	He	1.254	ppb	1.0	11827.10	100	
Ba	137	115	He	78.792	ppb	1.7	131623.47	5000	
Ce	140	115	He	35.334	ppb	1.1	1018139.65	2000	
Tl	205	159	He	0.125	ppb	2.0	3683.85	5000	
Pb	208	159	He	2.994	ppb	1.3	109115.80	5000	
Th	232	159	He	27.132	ppb	0.4	416716.70	100	
U	238	159	He	4.057	ppb	0.8	145718.78	5000	

**QC ISTD Table**

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	229426.30	0.7	222181.13	103.26	60	120	
Ge (IS)	72	He	181356.52	0.3	177648.1	102.09	60	120	
In-115 (IS)	115	He	1860850.15	1.2	1890884.26	98.41	60	120	
Tb-159 (IS)	159	He	6186802.95	0.5	6270485.31	98.67	60	120	

# Sample Report

Sample Name	440-258909-b-3-a@20
File Name	072SMPL.d
Data Path Name	D:\Agilent\CPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 18:14:37
Sample Type	Sample
Total Dilution	1.0000
Comment	CAM SOIL 440-590384 ES
Location	3109

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	0.486	ppb	0.6	29.17	1000	
Al	27	45	He	11733.988	ppb	1.6	1502930.42	5000	>LDR
V	51	45	He	36.828	ppb	1.1	183375.10	5000	
Cr	52	45	He	18.462	ppb	2.0	117251.43	5000	
Mn	55	45	He	230.525	ppb	0.9	692717.82	4000	
Fe	56	45	He	22158.515	ppb	1.4	111507404.46	30000	
Co	59	45	He	13.811	ppb	1.0	158568.87	5000	
Ni	60	45	He	25.994	ppb	1.0	82462.68	5000	
Cu	65	45	He	2115.664	ppb	1.1	9513762.40	5000	
Zn	66	72	He	36.829	ppb	1.4	43646.20	5000	
As	75	72	He	1.838	ppb	5.1	1364.07	5000	
Se	78	72	He	2.871	ppb	3.3	171.67	5000	
Rb	85	115	He	19.895	ppb	0.8	56775.38	100	
Sr	88	115	He	38.041	ppb	0.4	140204.72	5000	
Mo	95	115	He	4.757	ppb	1.1	19603.01	3000	
Ag	107	115	He	0.168	ppb	3.7	2439.10	100	
Cd	111	115	He	0.060	ppb	11.8	116.67	5000	
Sn	118	115	He	1.627	ppb	0.1	6479.26	2000	
Sb	121	115	He	0.376	ppb	2.4	1725.67	5000	
Cs	133	115	He	1.491	ppb	1.1	13920.10	100	
Ba	137	115	He	91.569	ppb	0.7	151446.93	5000	
Ce	140	115	He	30.255	ppb	0.9	863151.70	2000	
Tl	205	159	He	0.152	ppb	4.0	4461.86	5000	
Pb	208	159	He	2.334	ppb	0.6	85132.36	5000	
Th	232	159	He	20.481	ppb	0.6	313499.47	100	
U	238	159	He	5.648	ppb	0.7	202154.57	5000	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	227728.93	0.4	222181.13	102.5	60	120	
Ge (IS)	72	He	181648.49	0.6	177648.1	102.25	60	120	
In-115 (IS)	115	He	1842169.87	0.2	1890884.26	97.42	60	120	
Tb-159 (IS)	159	He	6165429.20	0.5	6270485.31	98.32	60	120	

# Sample Report

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<b>Sample Name</b>	440-258909-b-4-a@20
<b>File Name</b>	073SMPL.d
<b>Data Path Name</b>	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
<b>Acq Time</b>	2020-01-14 18:16:40
<b>Sample Type</b>	Sample
<b>Total Dilution</b>	1.0000
<b>Comment</b>	CAM SOIL 440-590384 ES
<b>Location</b>	3110

**QC Analyte Table**

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	0.472	ppb	16.4	28.33	1000	
Al	27	45	He	14565.750	ppb	1.2	1866462.96	5000	>LDR
V	51	45	He	49.805	ppb	1.2	248040.03	5000	
Cr	52	45	He	19.518	ppb	1.3	123968.42	5000	
Mn	55	45	He	152,285	ppb	1.2	457868.59	4000	
Fe	56	45	He	22746.146	ppb	1.6	114515773.23	30000	
Co	59	45	He	8.594	ppb	1.4	98723.12	5000	
Ni	60	45	He	18.830	ppb	1.8	59785.09	5000	
Cu	65	45	He	900.718	ppb	1.7	4052326.51	5000	
Zn	66	72	He	30.895	ppb	1.0	36245.57	5000	
As	75	72	He	2.289	ppb	2.4	1677.43	5000	
Se	78	72	He	3.238	ppb	9.2	185.67	5000	
Rb	85	115	He	22.373	ppb	0.7	63446.53	100	
Sr	88	115	He	81.984	ppb	1.3	300191.23	5000	
Mo	95	115	He	3.419	ppb	2.9	14008.89	3000	
Ag	107	115	He	0.238	ppb	3.8	3412.63	100	
Cd	111	115	He	0.023	ppb	7.3	48.67	5000	
Sn	118	115	He	2.053	ppb	2.8	8073.38	2000	
Sb	121	115	He	0.424	ppb	7.2	1912.36	5000	
Cs	133	115	He	1.595	ppb	1.3	14799.85	100	
Ba	137	115	He	116.310	ppb	1.0	191152.51	5000	
Ce	140	115	He	31.188	ppb	1.0	884186.46	2000	
Tl	205	159	He	0.166	ppb	4.4	4855.33	5000	
Pb	208	159	He	2.898	ppb	2.5	105160.58	5000	
Th	232	159	He	27.075	ppb	1.6	413862.53	100	
U	238	159	He	2.411	ppb	1.3	86181.12	5000	

**QC ISTD Table**

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	227838.45	0.6	222181.13	102.55	60	120	
Ge (IS)	72	He	179626.62	0.2	177648.1	101.11	60	120	
In-115 (IS)	115	He	1830672.49	0.4	1890884.26	96.82	60	120	
Tb-159 (IS)	159	He	6157893.23	0.7	6270485.31	98.2	60	120	

# Sample Report

Sample Name	440-258909-b-6-a@20
File Name	074SMPL.d
Data Path Name	D:\Agilent\CPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 18:18:44
Sample Type	Sample
Total Dilution	1.0000
Comment	CAM SOIL 440-590384 ES
Location	3111

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	0.270	ppb	19.0	16.67	1000	
Al	27	45	He	14509.356	ppb	1.3	1876447.21	5000	>LDR
V	51	45	He	37.533	ppb	1.0	188700.38	5000	
Cr	52	45	He	14.363	ppb	0.9	92306.19	5000	
Mn	55	45	He	82.449	ppb	0.9	250264.86	4000	
Fe	56	45	He	48538.169	ppb	1.3	246621732.42	30000	>LDR
Co	59	45	He	5.099	ppb	1.3	59129.06	5000	
Ni	60	45	He	11.677	ppb	1.7	37449.44	5000	
Cu	65	45	He	1110.145	ppb	1.3	5040731.05	5000	
Zn	66	72	He	21.225	ppb	1.9	25292.30	5000	
As	75	72	He	9.209	ppb	1.3	6792.88	5000	
Se	78	72	He	6.302	ppb	4.9	322.33	5000	
Rb	85	115	He	13.019	ppb	0.2	37522.64	100	
Sr	88	115	He	261.477	ppb	0.4	972750.06	5000	
Mo	95	115	He	9.288	ppb	0.6	38620.23	3000	
Ag	107	115	He	0.176	ppb	3.8	2578.02	100	
Cd	111	115	He	0.052	ppb	5.4	103.33	5000	
Sn	118	115	He	10.575	ppb	0.5	41439.86	2000	
Sb	121	115	He	1.600	ppb	1.6	6930.56	5000	
Cs	133	115	He	1.400	ppb	0.2	13206.09	100	
Ba	137	115	He	85.283	ppb	0.4	142436.17	5000	
Ce	140	115	He	33.495	ppb	1.2	964923.40	2000	
Tl	205	159	He	0.146	ppb	2.7	4311.81	5000	
Pb	208	159	He	6.443	ppb	0.3	232691.76	5000	
Th	232	159	He	30.045	ppb	0.4	460785.85	100	
U	238	159	He	3.919	ppb	0.9	140557.60	5000	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	229943.67	0.6	222181.13	103.49	60	120	
Ge (IS)	72	He	181907.03	0.4	177648.1	102.4	60	120	
In-115 (IS)	115	He	1860235.22	0.3	1890884.26	98.38	60	120	
Tb-159 (IS)	159	He	6178275.17	0.2	6270485.31	98.53	60	120	

# Sample Report

Sample Name	440-258909-b-7-a@20
File Name	075SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 18:20:49
Sample Type	Sample
Total Dilution	1.0000
Comment	CAM SOIL 440-590384 ES
Location	3112

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	0.204	ppb	27.4	12.83	1000	
Al	27	45	He	12111.897	ppb	1.2	1572692.75	5000	>LDR
V	51	45	He	40.381	ppb	1.1	203814.01	5000	
Cr	52	45	He	16.474	ppb	0.9	106166.54	5000	
Mn	55	45	He	68.288	ppb	1.1	208138.95	4000	
Fe	56	45	He	61646.471	ppb	1.1	314479587.50	30000	>LDR
Co	59	45	He	4.319	ppb	0.9	50297.42	5000	
Ni	60	45	He	10.707	ppb	1.9	34481.33	5000	
Cu	65	45	He	792.018	ppb	1.1	3610762.63	5000	
Zn	66	72	He	21.414	ppb	2.7	25498.20	5000	
As	75	72	He	9.532	ppb	1.8	7026.31	5000	
Se	78	72	He	6.841	ppb	6.9	345.67	5000	
Rb	85	115	He	15.266	ppb	0.5	44053.78	100	
Sr	88	115	He	293.064	ppb	1.0	1091689.82	5000	
Mo	95	115	He	12.916	ppb	1.4	53760.54	3000	
Ag	107	115	He	0.195	ppb	2.4	2858.07	100	
Cd	111	115	He	0.039	ppb	10.7	79.67	5000	
Sn	118	115	He	17.770	ppb	1.4	69593.15	2000	
Sb	121	115	He	1.675	ppb	3.4	7258.51	5000	
Cs	133	115	He	1.328	ppb	1.0	12541.07	100	
Ba	137	115	He	83.595	ppb	1.9	139802.10	5000	
Ce	140	115	He	40.199	ppb	0.9	1159571.52	2000	
Tl	205	159	He	0.156	ppb	2.5	4614.13	5000	
Pb	208	159	He	6.056	ppb	0.5	220068.64	5000	
Th	232	159	He	42.000	ppb	0.5	647801.69	100	
U	238	159	He	5.610	ppb	1.3	202382.07	5000	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	230859.17	0.1	222181.13	103.91	60	120	
Ge (IS)	72	He	181792.22	0.7	177648.1	102.33	60	120	
In-115 (IS)	115	He	1862700.25	0.4	1890884.26	98.51	60	120	
Tb-159 (IS)	159	He	6213882.67	0.1	6270485.31	99.1	60	120	

# Sample Report

Sample Name	440-258909-b-8-a@20
File Name	076SMPL.d
Data Path Name	D:\Agilent\CPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 18:22:55
Sample Type	Sample
Total Dilution	1.0000
Comment	CAM SOIL 440-590384 ES
Location	3201

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	0.171	ppb	7.8	10.83	1000	
Al	27	45	He	10823.925	ppb	1.0	1406716.17	5000	>LDR
V	51	45	He	49.980	ppb	1.0	252443.69	5000	
Cr	52	45	He	19.588	ppb	1.0	126179.74	5000	
Mn	55	45	He	76.496	ppb	1.1	233342.88	4000	
Fe	56	45	He	27514.403	ppb	1.3	140487398.86	30000	>LDR
Co	59	45	He	4.688	ppb	1.0	54633.46	5000	
Ni	60	45	He	12.959	ppb	0.9	41756.18	5000	
Cu	65	45	He	230.042	ppb	1.2	1049839.68	5000	
Zn	66	72	He	27.652	ppb	1.0	33068.36	5000	
As	75	72	He	4.048	ppb	1.4	3010.64	5000	
Se	78	72	He	2.849	ppb	9.4	172.00	5000	
Rb	85	115	He	18.980	ppb	0.7	54784.64	100	
Sr	88	115	He	64.367	ppb	0.6	239890.24	5000	
Mo	95	115	He	7.078	ppb	1.0	29484.87	3000	
Ag	107	115	He	0.159	ppb	7.6	2345.75	100	
Cd	111	115	He	0.021	ppb	23.3	45.33	5000	
Sn	118	115	He	10.537	ppb	0.8	41358.54	2000	
Sb	121	115	He	0.296	ppb	1.6	1402.30	5000	
Cs	133	115	He	1.485	ppb	1.0	14020.18	100	
Ba	137	115	He	100.585	ppb	0.2	168254.95	5000	
Ce	140	115	He	30.154	ppb	0.1	870093.32	2000	
Tl	205	159	He	0.154	ppb	3.4	4558.55	5000	
Pb	208	159	He	2.553	ppb	0.5	93925.72	5000	
Th	232	159	He	33.057	ppb	0.2	511257.06	100	
U	238	159	He	2.982	ppb	1.1	107866.24	5000	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	231072.46	0.6	222181.13	104	60	120	
Ge (IS)	72	He	182959.69	0.5	177648.1	102.99	60	120	
In-115 (IS)	115	He	1863229.37	0.5	1890884.26	98.54	60	120	
Tb-159 (IS)	159	He	6230523.78	0.3	6270485.31	99.36	60	120	

# Sample Report

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<b>Sample Name</b>	440-258909-b-9-a@20
<b>File Name</b>	077SMPL.d
<b>Data Path Name</b>	D:\Agilent\CPMH\1\DATA\200114-2LL.b
<b>Acq Time</b>	2020-01-14 18:25:01
<b>Sample Type</b>	Sample
<b>Total Dilution</b>	1.0000
<b>Comment</b>	CAM SOIL 440-590384 ES
<b>Location</b>	3202

**QC Analyte Table**

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	0.552	ppb	24.4	33.67	1000	
Al	27	45	He	13664.699	ppb	0.9	1785628.63	5000	>LDR
V	51	45	He	38.325	ppb	0.8	194680.84	5000	
Cr	52	45	He	16.721	ppb	1.4	108430.28	5000	
Mn	55	45	He	95.205	ppb	0.8	291967.60	4000	
Fe	56	45	He	18867.542	ppb	0.7	96868929.48	30000	
Co	59	45	He	7.272	ppb	1.0	85196.46	5000	
Ni	60	45	He	15.011	ppb	1.3	48619.82	5000	
Cu	65	45	He	1810.709	ppb	0.6	8307239.95	5000	
Zn	66	72	He	27.569	ppb	1.7	32992.64	5000	
As	75	72	He	2.819	ppb	1.6	2102.15	5000	
Se	78	72	He	3.437	ppb	8.9	198.00	5000	
Rb	85	115	He	14.744	ppb	0.2	42626.36	100	
Sr	88	115	He	51.481	ppb	0.6	192182.07	5000	
Mo	95	115	He	4.111	ppb	0.7	17162.21	3000	
Ag	107	115	He	0.169	ppb	4.5	2495.79	100	
Cd	111	115	He	0.036	ppb	17.4	73.33	5000	
Sn	118	115	He	2.518	ppb	4.4	10051.29	2000	
Sb	121	115	He	0.894	ppb	3.7	3949.45	5000	
Cs	133	115	He	1.303	ppb	0.1	12326.41	100	
Ba	137	115	He	84.620	ppb	0.4	141775.40	5000	
Ce	140	115	He	23.291	ppb	0.1	673099.63	2000	
Tl	205	159	He	0.112	ppb	0.6	3329.31	5000	
Pb	208	159	He	2.663	ppb	0.4	97839.35	5000	
Th	232	159	He	22.481	ppb	1.0	347483.59	100	
U	238	159	He	3.108	ppb	1.1	112349.55	5000	

**QC ISTD Table**

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	232328.91	0.3	222181.13	104.57	60	120	
Ge (IS)	72	He	183075.46	0.3	177648.1	103.06	60	120	
In-115 (IS)	115	He	1866110.50	0.2	1890884.26	98.69	60	120	
Tb-159 (IS)	159	He	6225955.03	0.1	6270485.31	99.29	60	120	

# Sample Report

Sample Name	440-258909-b-10-a@20
File Name	078SMPL.d
Data Path Name	D:\Agilent\CPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 18:27:05
Sample Type	Sample
Total Dilution	1.0000
Comment	CAM SOIL 440-590384 ES
Location	3203

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	0.555	ppb	12.2	33.83	1000	
Al	27	45	He	15593.509	ppb	0.9	2035587.25	5000	>LDR
V	51	45	He	45.801	ppb	0.9	232379.10	5000	
Cr	52	45	He	21.032	ppb	1.3	136011.21	5000	
Mn	55	45	He	110.002	ppb	1.2	336968.71	4000	
Fe	56	45	He	21112.001	ppb	1.1	108278729.03	30000	
Co	59	45	He	7.781	ppb	1.3	91054.55	5000	
Ni	60	45	He	16.439	ppb	1.5	53180.63	5000	
Cu	65	45	He	1432.125	ppb	1.0	6563622.24	5000	
Zn	66	72	He	29.860	ppb	0.4	35854.70	5000	
As	75	72	He	3.092	ppb	3.9	2313.85	5000	
Se	78	72	He	3.608	ppb	6.3	206.33	5000	
Rb	85	115	He	17.314	ppb	1.1	49787.21	100	
Sr	88	115	He	62.854	ppb	0.7	233369.49	5000	
Mo	95	115	He	4.733	ppb	1.7	19650.86	3000	
Ag	107	115	He	0.166	ppb	2.7	2427.99	100	
Cd	111	115	He	0.046	ppb	6.2	91.33	5000	
Sn	118	115	He	3.070	ppb	2.5	12146.22	2000	
Sb	121	115	He	0.534	ppb	2.3	2405.77	5000	
Cs	133	115	He	1.456	ppb	0.7	13695.41	100	
Ba	137	115	He	94.758	ppb	0.4	157907.97	5000	
Ce	140	115	He	26.518	ppb	1.0	762273.23	2000	
Tl	205	159	He	0.131	ppb	0.9	3906.13	5000	
Pb	208	159	He	2.827	ppb	1.1	103785.04	5000	
Th	232	159	He	23.995	ppb	0.4	370904.77	100	
U	238	159	He	3.666	ppb	1.1	132528.15	5000	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	232091.16	0.9	222181.13	104.46	60	120	
Ge (IS)	72	He	183798.87	0.7	177648.1	103.46	60	120	
In-115 (IS)	115	He	1856144.75	0.4	1890884.26	98.16	60	120	
Tb-159 (IS)	159	He	6226649.75	1.1	6270485.31	99.3	60	120	

# Sample Report

Sample Name	440-258909-b-11-a@20
File Name	079SMPL.d
Data Path Name	D:\Agilent\CPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 18:29:09
Sample Type	Sample
Total Dilution	1.0000
Comment	CAM SOIL 440-590384 ES
Location	3204

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	0.229	ppb	28.8	14.50	1000	
Al	27	45	He	11444.338	ppb	1.4	1507816.46	5000	>LDR
V	51	45	He	31.530	ppb	1.8	161517.47	5000	
Cr	52	45	He	11.675	ppb	1.1	76601.22	5000	
Mn	55	45	He	77.860	ppb	1.8	240769.98	4000	
Fe	56	45	He	24392.505	ppb	1.4	126264217.20	30000	
Co	59	45	He	4.841	ppb	1.6	57189.42	5000	
Ni	60	45	He	11.991	ppb	0.4	39176.04	5000	
Cu	65	45	He	1388.590	ppb	1.3	6423205.16	5000	
Zn	66	72	He	22.061	ppb	1.2	26748.12	5000	
As	75	72	He	13.926	ppb	0.4	10449.63	5000	
Se	78	72	He	12.358	ppb	1.8	598.34	5000	
Rb	85	115	He	11.899	ppb	0.7	34663.55	100	
Sr	88	115	He	91.420	ppb	0.3	343816.58	5000	
Mo	95	115	He	5.559	ppb	1.7	23372.94	3000	
Ag	107	115	He	0.203	ppb	1.4	3008.10	100	
Cd	111	115	He	0.020	ppb	6.9	44.67	5000	
Sn	118	115	He	1.699	ppb	2.0	6898.34	2000	
Sb	121	115	He	2.980	ppb	0.4	12923.57	5000	
Cs	133	115	He	1.612	ppb	1.9	15357.10	100	
Ba	137	115	He	93.416	ppb	0.5	157697.80	5000	
Ce	140	115	He	40.863	ppb	0.5	1189906.97	2000	
Tl	205	159	He	0.289	ppb	2.6	8551.60	5000	
Pb	208	159	He	5.578	ppb	0.2	204380.58	5000	
Th	232	159	He	20.389	ppb	0.7	316955.25	100	
U	238	159	He	3.106	ppb	0.5	112900.79	5000	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	234255.43	0.5	222181.13	105.43	60	120	
Ge (IS)	72	He	185157.72	0.5	177648.1	104.23	60	120	
In-115 (IS)	115	He	1880326.57	0.7	1890884.26	99.44	60	120	
Tb-159 (IS)	159	He	6261399.20	0.5	6270485.31	99.86	60	120	

# Sample Report

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<b>Sample Name</b>	440-258909-b-12-a@20
<b>File Name</b>	080SMPL.d
<b>Data Path Name</b>	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
<b>Acq Time</b>	2020-01-14 18:31:13
<b>Sample Type</b>	Sample
<b>Total Dilution</b>	1.0000
<b>Comment</b>	CAM SOIL 440-590384 ES
<b>Location</b>	3205

**QC Analyte Table**

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	0.177	ppb	45.2	11.33	1000	
Al	27	45	He	10173.434	ppb	1.3	1331627.42	5000	>LDR
V	51	45	He	45.960	ppb	0.6	233821.42	5000	
Cr	52	45	He	22.093	ppb	1.0	143225.03	5000	
Mn	55	45	He	79.841	ppb	1.4	245282.90	4000	
Fe	56	45	He	32723.225	ppb	1.3	168278526.65	30000	>LDR
Co	59	45	He	4.838	ppb	1.2	56787.97	5000	
Ni	60	45	He	12.468	ppb	2.6	40459.40	5000	
Cu	65	45	He	726.210	ppb	1.2	3337394.87	5000	
Zn	66	72	He	25.455	ppb	1.6	30548.64	5000	
As	75	72	He	7.154	ppb	1.5	5325.61	5000	
Se	78	72	He	4.392	ppb	7.4	240.67	5000	
Rb	85	115	He	15.953	ppb	0.5	46475.52	100	
Sr	88	115	He	57.886	ppb	1.0	217747.80	5000	
Mo	95	115	He	7.123	ppb	1.9	29945.81	3000	
Ag	107	115	He	0.217	ppb	2.1	3205.92	100	
Cd	111	115	He	0.012	ppb	41.1	30.67	5000	
Sn	118	115	He	9.073	ppb	0.6	35972.14	2000	
Sb	121	115	He	0.534	ppb	3.5	2437.99	5000	
Cs	133	115	He	1.348	ppb	1.7	12852.43	100	
Ba	137	115	He	85.491	ppb	0.9	144336.20	5000	
Ce	140	115	He	23.813	ppb	0.4	693497.37	2000	
Tl	205	159	He	0.160	ppb	2.0	4766.41	5000	
Pb	208	159	He	2.729	ppb	1.4	100639.84	5000	
Th	232	159	He	28.805	ppb	1.3	446937.88	100	
U	238	159	He	3.727	ppb	2.4	135237.30	5000	

**QC ISTD Table**

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	232727.72	0.6	222181.13	104.75	60	120	
Ge (IS)	72	He	183480.39	0.7	177648.1	103.28	60	120	
In-115 (IS)	115	He	1880517.85	0.3	1890884.26	99.45	60	120	
Tb-159 (IS)	159	He	6250566.14	0.5	6270485.31	99.68	60	120	

# Continuing Calibration Verification (CCV) Report

Sample Name	CCV-6043373
File Name	081_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 18:40:04
Sample Type	CCV
Total Dilution	1.0000
Comment	—
Location	1206

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Be	9	45	He	49.372	ppb	0.8	2951.11	50	98.74	90	110	
Al	27	45	He	50.791	ppb	1.1	6735.47	50	101.58	90	110	
V	51	45	He	50.587	ppb	0.6	256845.76	50	101.17	90	110	
Cr	52	45	He	50.395	ppb	0.9	324932.17	50	100.79	90	110	
Mn	55	45	He	49.870	ppb	0.9	152972.46	50	99.74	90	110	
Fe	56	45	He	501.006	ppb	1.1	2579375.94	500	100.2	90	110	
Co	59	45	He	50.479	ppb	0.9	591039.51	50	100.96	90	110	
Ni	60	45	He	50.261	ppb	0.9	162553.42	50	100.52	90	110	
Cu	65	45	He	50.054	ppb	1.0	229814.29	50	100.11	90	110	
Zn	66	72	He	49.969	ppb	0.6	60593.10	50	99.94	90	110	
As	75	72	He	50.431	ppb	0.7	38004.17	50	100.86	90	110	
Se	78	72	He	49.885	ppb	3.5	2284.84	50	99.77	90	110	
Rb	85	115	He	51.601	ppb	0.4	153666.44	50	103.2	90	110	
Sr	88	115	He	51.232	ppb	0.5	197051.41	50	102.46	90	110	
Mo	95	115	He	50.823	ppb	0.6	218260.42	50	101.65	90	110	
Ag	107	115	He	51.095	ppb	0.5	759405.00	50	102.19	90	110	
Cd	111	115	He	50.431	ppb	0.1	96410.73	50	100.86	90	110	
Sn	118	115	He	50.231	ppb	0.5	202680.32	50	100.46	90	110	
Sb	121	115	He	51.042	ppb	0.3	223864.83	50	102.08	90	110	
Cs	133	115	He	50.052	ppb	0.5	487234.39	50	100.1	90	110	
Ba	137	115	He	48.991	ppb	0.6	84581.41	50	97.98	90	110	
Ce	140	115	He	46.624	ppb	0.6	1388186.65	50	93.25	90	110	
Tl	205	159	He	46.778	ppb	1.5	1381769.80	50	93.56	90	110	
Pb	208	159	He	48.847	ppb	0.9	1784804.65	50	97.69	90	110	
Th	232	159	He	1.274	ppb	3.2	20017.07	50	2.55	90	110	> +/- 10%
U	238	159	He	50.164	ppb	0.3	1830907.58	50	100.33	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	232279.07	0.9	222181.13	104.54	60	120	
Ge (IS)	72	He	186128.62	0.4	177648.1	104.77	60	120	
In-115 (IS)	115	He	1922691.83	0.9	1890884.26	101.68	60	120	
Tb-159 (IS)	159	He	6287804.61	0.5	6270485.31	100.28	60	120	

# Continuing Calibration Blank (CCB) Report

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**Sample Name** CCB-6043371  
**File Name** 082\_CCB.d  
**Data Path Name** D:\Agilent\ICPMH\1\DATA\200114-2LL.b  
**Acq Time** 2020-01-14 18:42:08  
**Sample Type** CCB  
**Total Dilution** 1.0000  
**Comment** —  
**Location** 1207

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Be	9	45	He	0.057	ppb	51.8	4.00	0.5	
Al	27	45	He	0.375	ppb	87.3	146.00	10	
V	51	45	He	0.059	ppb	32.1	475.58	1	
Cr	52	45	He	0.046	ppb	70.9	1150.09	1	
Mn	55	45	He	0.037	ppb	26.3	271.12	1	
Fe	56	45	He	1.631	ppb	3.2	15891.79	20	
Co	59	45	He	0.065	ppb	16.0	781.32	1	
Ni	60	45	He	0.063	ppb	27.6	276.68	1	
Cu	65	45	He	0.138	ppb	2.4	851.19	1	
Zn	66	72	He	0.014	ppb	78.3	257.78	20	
As	75	72	He	0.072	ppb	42.5	66.33	1	
Se	78	72	He	0.311	ppb	37.7	60.00	1	
Rb	85	115	He	0.110	ppb	64.2	336.70	1	
Sr	88	115	He	0.129	ppb	58.8	557.85	1	
Mo	95	115	He	0.139	ppb	46.3	615.63	1	
Ag	107	115	He	0.100	ppb	44.2	1512.68	1	
Cd	111	115	He	0.086	ppb	19.4	169.67	1	
Sn	118	115	He	0.092	ppb	9.9	564.48	10	
Sb	121	115	He	0.201	ppb	11.1	1015.62	1	
Cs	133	115	He	0.091	ppb	29.6	882.38	1	
Ba	137	115	He	0.076	ppb	67.1	164.45	1	
Ce	140	115	He	0.085	ppb	54.4	2516.13	1	
Tl	205	159	He	0.074	ppb	43.1	2222.31	1	
Pb	208	159	He	0.041	ppb	69.5	3078.51	1	
Th	232	159	He	0.005	ppb	31.5	222.23	1	
U	238	159	He	0.073	ppb	41.4	2675.35	1	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	226978.86	0.3	222181.13	102.16	60	120	
Ge (IS)	72	He	182750.66	0.3	177648.1	102.87	60	120	
In-115 (IS)	115	He	1887874.22	0.3	1890884.26	99.84	60	120	
Tb-159 (IS)	159	He	6232345.17	0.6	6270485.31	99.39	60	120	

# Sample Report

Sample Name	440-258909-b-13-a@20
File Name	083SMPL.d
Data Path Name	D:\Agilent\CPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 18:44:14
Sample Type	Sample
Total Dilution	1.0000
Comment	CAM SOIL 440-590384 ES
Location	3206

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	0.332	ppb	15.4	20.67	1000	
Al	27	45	He	11364.131	ppb	1.4	1494474.17	5000	>LDR
V	51	45	He	63.659	ppb	1.5	325308.15	5000	
Cr	52	45	He	35.901	ppb	1.8	233261.74	5000	
Mn	55	45	He	87.948	ppb	1.3	271443.89	4000	
Fe	56	45	He	26924.381	ppb	1.8	139107212.25	30000	
Co	59	45	He	5.486	ppb	1.5	64687.05	5000	
Ni	60	45	He	13.157	ppb	1.0	42894.93	5000	
Cu	65	45	He	720.112	ppb	1.8	3324863.62	5000	
Zn	66	72	He	29.950	ppb	1.6	36242.32	5000	
As	75	72	He	3.337	ppb	1.5	2515.22	5000	
Se	78	72	He	2.943	ppb	10.1	178.33	5000	
Rb	85	115	He	17.332	ppb	0.5	50214.19	100	
Sr	88	115	He	47.639	ppb	0.4	178227.63	5000	
Mo	95	115	He	5.781	ppb	1.4	24177.54	3000	
Ag	107	115	He	0.226	ppb	2.6	3315.96	100	
Cd	111	115	He	0.025	ppb	1.2	54.33	5000	
Sn	118	115	He	2.448	ppb	0.8	9798.88	2000	
Sb	121	115	He	0.452	ppb	4.6	2073.49	5000	
Cs	133	115	He	1.480	ppb	2.9	14032.43	100	
Ba	137	115	He	78.461	ppb	1.6	131742.53	5000	
Ce	140	115	He	23.919	ppb	0.5	692730.83	2000	
Tl	205	159	He	0.158	ppb	2.8	4686.42	5000	
Pb	208	159	He	3.021	ppb	1.2	110616.30	5000	
Th	232	159	He	32.092	ppb	0.4	495163.12	100	
U	238	159	He	10.697	ppb	1.1	385927.26	5000	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	233834.26	1.0	222181.13	105.24	60	120	
Ge (IS)	72	He	185245.08	0.5	177648.1	104.28	60	120	
In-115 (IS)	115	He	1870136.47	0.1	1890884.26	98.9	60	120	
Tb-159 (IS)	159	He	6215845.31	0.7	6270485.31	99.13	60	120	

# Sample Report

Sample Name	440-258909-b-14-a@20
File Name	084SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 18:46:19
Sample Type	Sample
Total Dilution	1.0000
Comment	CAM SOIL 440-590384 ES
Location	3207

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	0.361	ppb	17.5	22.50	1000	
Al	27	45	He	11730.258	ppb	0.8	1549483.88	5000	>LDR
V	51	45	He	66.480	ppb	1.2	341232.93	5000	
Cr	52	45	He	38.425	ppb	0.8	250718.45	5000	
Mn	55	45	He	88.414	ppb	0.8	274097.84	4000	
Fe	56	45	He	28626.723	ppb	0.8	148564305.21	30000	>LDR
Co	59	45	He	5.724	ppb	1.3	67792.76	5000	
Ni	60	45	He	13.448	ppb	1.1	44037.02	5000	
Cu	65	45	He	725.944	ppb	0.8	3366788.41	5000	
Zn	66	72	He	30.891	ppb	0.8	37415.11	5000	
As	75	72	He	3.703	ppb	1.2	2792.93	5000	
Se	78	72	He	3.046	ppb	17.7	183.00	5000	
Rb	85	115	He	18.369	ppb	1.4	53672.91	100	
Sr	88	115	He	43.520	ppb	1.4	164219.57	5000	
Mo	95	115	He	5.679	ppb	2.0	23952.76	3000	
Ag	107	115	He	0.231	ppb	1.8	3418.20	100	
Cd	111	115	He	0.021	ppb	33.3	47.33	5000	
Sn	118	115	He	2.733	ppb	1.2	11009.74	2000	
Sb	121	115	He	0.439	ppb	7.7	2037.93	5000	
Cs	133	115	He	1.509	ppb	1.1	14430.59	100	
Ba	137	115	He	81.582	ppb	0.7	138153.91	5000	
Ce	140	115	He	23.389	ppb	0.7	683182.27	2000	
Tl	205	159	He	0.160	ppb	2.1	4741.96	5000	
Pb	208	159	He	3.071	ppb	1.2	112871.86	5000	
Th	232	159	He	32.092	ppb	1.0	497196.87	100	
U	238	159	He	9.870	ppb	1.4	357562.33	5000	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	234849.72	0.4	222181.13	105.7	60	120	
Ge (IS)	72	He	185440.91	0.5	177648.1	104.39	60	120	
In-115 (IS)	115	He	1886153.77	0.2	1890884.26	99.75	60	120	
Tb-159 (IS)	159	He	6241190.86	0.6	6270485.31	99.53	60	120	

# Sample Report

Sample Name	440-258909-b-15-a@20
File Name	085SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 18:48:24
Sample Type	Sample
Total Dilution	1.0000
Comment	CAM SOIL 440-590384 ES
Location	3208

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	0.574	ppb	5.1	35.00	1000	
Al	27	45	He	12818.308	ppb	0.4	1674057.75	5000	>LDR
V	51	45	He	40.555	ppb	0.5	205879.66	5000	
Cr	52	45	He	15.882	ppb	0.1	102972.81	5000	
Mn	55	45	He	185.190	ppb	1.0	567431.92	4000	
Fe	56	45	He	18536.488	ppb	0.6	95115749.55	30000	
Co	59	45	He	10.555	ppb	0.3	123566.54	5000	
Ni	60	45	He	19.014	ppb	0.1	61528.59	5000	
Cu	65	45	He	1740.058	ppb	0.7	7978511.63	5000	
Zn	66	72	He	33.971	ppb	1.5	40657.88	5000	
As	75	72	He	2.275	ppb	1.6	1701.77	5000	
Se	78	72	He	3.437	ppb	9.9	198.33	5000	
Rb	85	115	He	15.190	ppb	1.5	43816.42	100	
Sr	88	115	He	50.589	ppb	1.4	188429.50	5000	
Mo	95	115	He	3.802	ppb	1.4	15841.83	3000	
Ag	107	115	He	0.167	ppb	3.1	2452.44	100	
Cd	111	115	He	0.078	ppb	3.3	152.00	5000	
Sn	118	115	He	1.593	ppb	3.2	6418.11	2000	
Sb	121	115	He	0.365	ppb	6.0	1696.78	5000	
Cs	133	115	He	1.153	ppb	0.9	10889.71	100	
Ba	137	115	He	71.704	ppb	0.8	119879.77	5000	
Ce	140	115	He	27.476	ppb	0.8	792301.88	2000	
Tl	205	159	He	0.115	ppb	4.5	3427.12	5000	
Pb	208	159	He	2.412	ppb	1.1	88523.90	5000	
Th	232	159	He	20.164	ppb	1.1	310793.04	100	
U	238	159	He	8.203	ppb	0.7	295641.00	5000	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	232200.17	1.0	222181.13	104.51	60	120	
Ge (IS)	72	He	183348.23	0.3	177648.1	103.21	60	120	
In-115 (IS)	115	He	1862086.13	0.8	1890884.26	98.48	60	120	
Tb-159 (IS)	159	He	6208456.84	0.6	6270485.31	99.01	60	120	

# Sample Report

Sample Name	440-258909-b-16-a@20
File Name	086SMPL.d
Data Path Name	D:\Agilent\CPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 18:50:28
Sample Type	Sample
Total Dilution	1.0000
Comment	CAM SOIL 440-590384 ES
Location	3209

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	0.318	ppb	14.7	19.83	1000	
Al	27	45	He	13656.532	ppb	1.3	1798513.92	5000	>LDR
V	51	45	He	50.774	ppb	0.7	259872.93	5000	
Cr	52	45	He	25.174	ppb	1.1	164068.89	5000	
Mn	55	45	He	116.996	ppb	0.9	361564.31	4000	
Fe	56	45	He	45215.780	ppb	1.4	233949315.15	30000	>LDR
Co	59	45	He	10.059	ppb	0.8	118757.40	5000	
Ni	60	45	He	20.546	ppb	1.9	67035.08	5000	
Cu	65	45	He	1113.645	ppb	1.0	5149258.83	5000	
Zn	66	72	He	31.053	ppb	0.8	37645.72	5000	
As	75	72	He	11.591	ppb	2.2	8721.20	5000	
Se	78	72	He	4.702	ppb	7.5	257.33	5000	
Rb	85	115	He	22.730	ppb	0.8	66311.18	100	
Sr	88	115	He	92.418	ppb	0.6	348116.49	5000	
Mo	95	115	He	11.310	ppb	0.8	47602.93	3000	
Ag	107	115	He	0.246	ppb	0.6	3637.13	100	
Cd	111	115	He	0.029	ppb	13.0	62.33	5000	
Sn	118	115	He	15.301	ppb	1.2	60616.63	2000	
Sb	121	115	He	0.695	ppb	6.6	3131.47	5000	
Cs	133	115	He	1.907	ppb	1.6	18198.18	100	
Ba	137	115	He	93.494	ppb	0.4	158076.46	5000	
Ce	140	115	He	40.181	ppb	1.0	1171870.16	2000	
Tl	205	159	He	0.228	ppb	3.1	6761.70	5000	
Pb	208	159	He	3.498	ppb	0.6	128495.17	5000	
Th	232	159	He	43.946	ppb	0.7	681532.21	100	
U	238	159	He	5.556	ppb	1.2	201512.18	5000	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	234146.12	0.3	222181.13	105.39	60	120	
Ge (IS)	72	He	185619.94	0.4	177648.1	104.49	60	120	
In-115 (IS)	115	He	1883222.21	0.5	1890884.26	99.59	60	120	
Tb-159 (IS)	159	He	6248104.75	0.6	6270485.31	99.64	60	120	

# Sample Report

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<b>Sample Name</b>	440-258909-b-17-a@20
<b>File Name</b>	087SMPL.d
<b>Data Path Name</b>	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
<b>Acq Time</b>	2020-01-14 18:52:34
<b>Sample Type</b>	Sample
<b>Total Dilution</b>	1.0000
<b>Comment</b>	CAM SOIL 440-590384 ES
<b>Location</b>	3210

**QC Analyte Table**

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	0.179	ppb	30.7	11.50	1000	
Al	27	45	He	10180.885	ppb	1.7	1341140.42	5000	>LDR
V	51	45	He	37.331	ppb	0.9	191175.11	5000	
Cr	52	45	He	14.406	ppb	1.4	94297.21	5000	
Mn	55	45	He	93.530	ppb	0.9	289155.53	4000	
Fe	56	45	He	26491.329	ppb	1.1	137107785.66	30000	
Co	59	45	He	6.845	ppb	1.1	80841.74	5000	
Ni	60	45	He	13.408	ppb	0.9	43785.23	5000	
Cu	65	45	He	773.674	ppb	1.1	3578379.86	5000	
Zn	66	72	He	28.340	ppb	0.8	34209.76	5000	
As	75	72	He	4.414	ppb	2.3	3313.03	5000	
Se	78	72	He	2.985	ppb	5.3	179.67	5000	
Rb	85	115	He	17.689	ppb	0.8	51678.10	100	
Sr	88	115	He	42.063	ppb	1.5	158689.36	5000	
Mo	95	115	He	5.869	ppb	2.9	24750.71	3000	
Ag	107	115	He	0.247	ppb	4.2	3660.48	100	
Cd	111	115	He	0.017	ppb	38.9	39.00	5000	
Sn	118	115	He	7.362	ppb	0.8	29310.62	2000	
Sb	121	115	He	0.382	ppb	3.9	1790.12	5000	
Cs	133	115	He	1.263	ppb	1.1	12073.99	100	
Ba	137	115	He	85.989	ppb	0.7	145589.74	5000	
Ce	140	115	He	21.294	ppb	1.3	621880.67	2000	
Tl	205	159	He	0.143	ppb	5.1	4275.13	5000	
Pb	208	159	He	1.473	ppb	1.7	55076.91	5000	
Th	232	159	He	19.413	ppb	0.6	301487.96	100	
U	238	159	He	3.037	ppb	1.0	110299.63	5000	

**QC ISTD Table**

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	234220.95	0.6	222181.13	105.42	60	120	
Ge (IS)	72	He	184706.40	0.5	177648.1	103.97	60	120	
In-115 (IS)	115	He	1885867.76	0.5	1890884.26	99.73	60	120	
Tb-159 (IS)	159	He	6255175.58	0.4	6270485.31	99.76	60	120	

# Sample Report

Sample Name	440-258909-b-18-a@20
File Name	088SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 18:54:39
Sample Type	Sample
Total Dilution	1.0000
Comment	CAM SOIL 440-590384 ES
Location	3211

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	0.263	ppb	22.0	16.50	1000	
Al	27	45	He	11284.351	ppb	1.5	1480016.25	5000	>LDR
V	51	45	He	37.904	ppb	1.2	193254.15	5000	
Cr	52	45	He	20.028	ppb	1.4	130177.35	5000	
Mn	55	45	He	117.775	ppb	1.5	362474.63	4000	
Fe	56	45	He	28499.967	ppb	1.5	146857056.39	30000	>LDR
Co	59	45	He	9.217	ppb	1.9	108371.78	5000	
Ni	60	45	He	15.269	ppb	1.5	49634.27	5000	
Cu	65	45	He	1027.359	ppb	1.4	4730829.53	5000	
Zn	66	72	He	31.442	ppb	1.4	38181.47	5000	
As	75	72	He	5.980	ppb	1.6	4513.69	5000	
Se	78	72	He	2.855	ppb	7.3	175.00	5000	
Rb	85	115	He	18.462	ppb	1.3	54015.25	100	
Sr	88	115	He	47.942	ppb	1.6	181129.67	5000	
Mo	95	115	He	6.234	ppb	2.2	26322.28	3000	
Ag	107	115	He	0.221	ppb	1.3	3283.72	100	
Cd	111	115	He	0.025	ppb	5.2	54.67	5000	
Sn	118	115	He	13.290	ppb	1.1	52826.54	2000	
Sb	121	115	He	0.438	ppb	7.2	2034.60	5000	
Cs	133	115	He	1.420	ppb	0.9	13593.13	100	
Ba	137	115	He	82.322	ppb	1.2	139588.82	5000	
Ce	140	115	He	21.954	ppb	1.1	642121.66	2000	
Tl	205	159	He	0.162	ppb	2.9	4807.52	5000	
Pb	208	159	He	2.007	ppb	1.1	74370.47	5000	
Th	232	159	He	28.963	ppb	1.6	449082.81	100	
U	238	159	He	7.333	ppb	2.2	265869.21	5000	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	233196.80	0.5	222181.13	104.96	60	120	
Ge (IS)	72	He	185944.12	0.2	177648.1	104.67	60	120	
In-115 (IS)	115	He	1888752.13	1.1	1890884.26	99.89	60	120	
Tb-159 (IS)	159	He	6246751.42	1.0	6270485.31	99.62	60	120	

# Sample Report

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<b>Sample Name</b>	440-258909-b-19-a@20
<b>File Name</b>	089SMPL.d
<b>Data Path Name</b>	D:\Agilent\CPMH\1\DATA\200114-2LL.b
<b>Acq Time</b>	2020-01-14 18:56:45
<b>Sample Type</b>	Sample
<b>Total Dilution</b>	1.0000
<b>Comment</b>	CAM SOIL 440-590384 ES
<b>Location</b>	3212

**QC Analyte Table**

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	0.493	ppb	14.5	30.67	1000	
Al	27	45	He	12840.353	ppb	1.4	1707438.21	5000	>LDR
V	51	45	He	44.092	ppb	1.4	227890.01	5000	
Cr	52	45	He	23.999	ppb	2.1	157968.72	5000	
Mn	55	45	He	138.152	ppb	1.2	431058.89	4000	
Fe	56	45	He	26858.633	ppb	1.5	140320136.65	30000	
Co	59	45	He	10.041	ppb	1.7	119692.35	5000	
Ni	60	45	He	16.375	ppb	1.5	53963.40	5000	
Cu	65	45	He	1408.349	ppb	1.4	6575086.13	5000	
Zn	66	72	He	30.543	ppb	0.6	36937.29	5000	
As	75	72	He	5.347	ppb	1.9	4020.54	5000	
Se	78	72	He	2.968	ppb	8.3	179.33	5000	
Rb	85	115	He	15.823	ppb	1.9	46555.77	100	
Sr	88	115	He	50.474	ppb	1.7	191773.95	5000	
Mo	95	115	He	3.710	ppb	0.4	15768.43	3000	
Ag	107	115	He	0.204	ppb	3.9	3045.88	100	
Cd	111	115	He	0.048	ppb	5.1	98.67	5000	
Sn	118	115	He	9.558	ppb	0.7	38264.53	2000	
Sb	121	115	He	0.431	ppb	4.0	2014.60	5000	
Cs	133	115	He	1.164	ppb	1.6	11209.94	100	
Ba	137	115	He	68.281	ppb	0.6	116443.39	5000	
Ce	140	115	He	19.456	ppb	1.7	572275.69	2000	
Tl	205	159	He	0.116	ppb	0.6	3504.91	5000	
Pb	208	159	He	2.055	ppb	0.5	76621.14	5000	
Th	232	159	He	33.741	ppb	0.6	526719.25	100	
U	238	159	He	11.060	ppb	0.1	403748.62	5000	

**QC ISTD Table**

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	236429.24	0.4	222181.13	106.41	60	120	
Ge (IS)	72	He	185150.36	0.4	177648.1	104.22	60	120	
In-115 (IS)	115	He	1899399.77	0.9	1890884.26	100.45	60	120	
Tb-159 (IS)	159	He	6288856.97	0.3	6270485.31	100.29	60	120	

# Sample Report

Sample Name	440-258909-b-20-a@20
File Name	090SMPL.d
Data Path Name	D:\Agilent\CPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 18:58:51
Sample Type	Sample
Total Dilution	1.0000
Comment	CAM SOIL 440-590384 ES
Location	3301

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	0.425	ppb	11.8	26.33	1000	
Al	27	45	He	14376.252	ppb	1.3	1894063.29	5000	>LDR
V	51	45	He	59.562	ppb	0.9	304946.84	5000	
Cr	52	45	He	15.719	ppb	1.0	102822.63	5000	
Mn	55	45	He	131.807	ppb	1.4	407481.44	4000	
Fe	56	45	He	54000.436	ppb	0.9	279515500.00	30000	>LDR
Co	59	45	He	7.918	ppb	0.8	93522.64	5000	
Ni	60	45	He	15.389	ppb	1.0	50250.64	5000	
Cu	65	45	He	1293.762	ppb	0.9	5984537.82	5000	
Zn	66	72	He	22.331	ppb	0.5	27175.58	5000	
As	75	72	He	12.370	ppb	0.9	9318.23	5000	
Se	78	72	He	6.592	ppb	6.2	342.33	5000	
Rb	85	115	He	22.745	ppb	0.4	66756.52	100	
Sr	88	115	He	248.832	ppb	0.6	942848.89	5000	
Mo	95	115	He	6.212	ppb	0.6	26317.85	3000	
Ag	107	115	He	0.279	ppb	2.5	4140.61	100	
Cd	111	115	He	0.050	ppb	13.4	102.33	5000	
Sn	118	115	He	4.930	ppb	1.9	19784.59	2000	
Sb	121	115	He	1.557	ppb	2.2	6874.99	5000	
Cs	133	115	He	1.282	ppb	2.5	12313.08	100	
Ba	137	115	He	72.510	ppb	0.2	123349.71	5000	
Ce	140	115	He	33.921	ppb	0.5	995296.91	2000	
Tl	205	159	He	0.176	ppb	2.4	5228.79	5000	
Pb	208	159	He	5.411	ppb	0.3	197805.41	5000	
Th	232	159	He	53.337	ppb	0.9	826772.50	100	
U	238	159	He	7.151	ppb	1.4	259249.33	5000	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	234246.38	0.1	222181.13	105.43	60	120	
Ge (IS)	72	He	185857.87	0.2	177648.1	104.62	60	120	
In-115 (IS)	115	He	1894676.22	0.2	1890884.26	100.2	60	120	
Tb-159 (IS)	159	He	6245082.67	0.4	6270485.31	99.59	60	120	

# Sample Report

Sample Name	440-258909-b-21-a@20
File Name	091SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 19:00:57
Sample Type	Sample
Total Dilution	1.0000
Comment	CAM SOIL 440-590384 ES
Location	3302

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	0.218	ppb	11.3	14.00	1000	
Al	27	45	He	15708.247	ppb	0.8	2094251.46	5000	>LDR
V	51	45	He	45.541	ppb	0.4	235990.60	5000	
Cr	52	45	He	12.829	ppb	0.8	85083.57	5000	
Mn	55	45	He	113.659	ppb	0.6	355593.05	4000	
Fe	56	45	He	26629.995	ppb	0.4	139489096.68	30000	
Co	59	45	He	7.106	ppb	0.7	84937.21	5000	
Ni	60	45	He	13.838	ppb	1.0	45729.82	5000	
Cu	65	45	He	1017.569	ppb	0.0	4763085.09	5000	
Zn	66	72	He	21.208	ppb	1.1	26132.63	5000	
As	75	72	He	9.460	ppb	2.3	7215.07	5000	
Se	78	72	He	4.869	ppb	16.0	268.33	5000	
Rb	85	115	He	14.215	ppb	1.5	41529.94	100	
Sr	88	115	He	91.018	ppb	1.0	343291.94	5000	
Mo	95	115	He	4.673	ppb	1.7	19712.02	3000	
Ag	107	115	He	0.295	ppb	5.1	4351.78	100	
Cd	111	115	He	0.022	ppb	22.7	49.33	5000	
Sn	118	115	He	1.791	ppb	2.1	7280.74	2000	
Sb	121	115	He	0.694	ppb	4.6	3133.69	5000	
Cs	133	115	He	1.409	ppb	2.2	13465.21	100	
Ba	137	115	He	69.356	ppb	0.3	117424.36	5000	
Ce	140	115	He	23.100	ppb	0.3	674572.16	2000	
Tl	205	159	He	0.112	ppb	6.3	3362.65	5000	
Pb	208	159	He	4.597	ppb	1.0	168715.30	5000	
Th	232	159	He	26.360	ppb	1.5	409710.04	100	
U	238	159	He	2.980	ppb	1.3	108313.41	5000	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	237036.06	0.6	222181.13	106.69	60	120	
Ge (IS)	72	He	188101.91	0.6	177648.1	105.88	60	120	
In-115 (IS)	115	He	1885680.80	0.5	1890884.26	99.72	60	120	
Tb-159 (IS)	159	He	6261413.22	0.9	6270485.31	99.86	60	120	

# Continuing Calibration Verification (CCV) Report

Sample Name	CCV-6043373
File Name	092_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 19:05:03
Sample Type	CCV
Total Dilution	1.0000
Comment	—
Location	1206

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Be	9	45	He	49.197	ppb	0.7	2994.29	50	98.39	90	110	
Al	27	45	He	60.162	ppb	7.5	8107.87	50	120.32	90	110	> +/- 10%
V	51	45	He	50.162	ppb	0.5	259338.03	50	100.32	90	110	
Cr	52	45	He	50.172	ppb	0.2	329395.93	50	100.34	90	110	
Mn	55	45	He	50.152	ppb	0.5	156636.74	50	100.3	90	110	
Fe	56	45	He	514.542	ppb	1.2	2697018.71	500	102.91	90	110	
Co	59	45	He	50.239	ppb	0.3	598931.36	50	100.48	90	110	
Ni	60	45	He	49.929	ppb	0.5	164424.56	50	99.86	90	110	
Cu	65	45	He	50.710	ppb	1.8	237048.28	50	101.42	90	110	
Zn	66	72	He	49.537	ppb	2.6	61176.65	50	99.07	90	110	
As	75	72	He	50.184	ppb	1.1	38516.81	50	100.37	90	110	
Se	78	72	He	50.442	ppb	3.3	2352.19	50	100.88	90	110	
Rb	85	115	He	51.558	ppb	0.5	155605.14	50	103.12	90	110	
Sr	88	115	He	51.324	ppb	0.3	200051.01	50	102.65	90	110	
Mo	95	115	He	50.757	ppb	0.0	220911.82	50	101.51	90	110	
Ag	107	115	He	50.814	ppb	0.7	765363.29	50	101.63	90	110	
Cd	111	115	He	50.259	ppb	0.4	97371.27	50	100.52	90	110	
Sn	118	115	He	50.562	ppb	0.5	206757.15	50	101.12	90	110	
Sb	121	115	He	50.740	ppb	1.1	225532.70	50	101.48	90	110	
Cs	133	115	He	49.951	ppb	0.4	492788.43	50	99.9	90	110	
Ba	137	115	He	49.325	ppb	1.0	86305.03	50	98.65	90	110	
Ce	140	115	He	46.597	ppb	0.5	1406005.26	50	93.19	90	110	
Tl	205	159	He	46.628	ppb	0.4	1392476.50	50	93.26	90	110	
Pb	208	159	He	48.803	ppb	0.6	1802777.46	50	97.61	90	110	
Th	232	159	He	1.334	ppb	0.9	21182.20	50	2.67	90	110	> +/- 10%
U	238	159	He	49.420	ppb	0.7	1823453.15	50	98.84	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	236501.08	1.2	222181.13	106.45	60	120	
Ge (IS)	72	He	189579.96	1.2	177648.1	106.72	60	120	
In-115 (IS)	115	He	1948497.43	0.6	1890884.26	103.05	60	120	
Tb-159 (IS)	159	He	6356568.63	0.1	6270485.31	101.37	60	120	

# Continuing Calibration Blank (CCB) Report

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**Sample Name** CCB-6043371  
**File Name** 093\_CCB.d  
**Data Path Name** D:\Agilent\ICPMH\1\DATA\200114-2LL.b  
**Acq Time** 2020-01-14 19:07:06  
**Sample Type** CCB  
**Total Dilution** 1.0000  
**Comment** —  
**Location** 1207

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Be	9	45	He	0.087	ppb	90.4	5.83	0.5	
Al	27	45	He	3.529	ppb	28.4	558.05	10	
V	51	45	He	0.078	ppb	27.8	580.04	1	
Cr	52	45	He	0.073	ppb	30.6	1344.55	1	
Mn	55	45	He	0.074	ppb	42.4	387.80	1	
Fe	56	45	He	8.033	ppb	21.6	48831.23	20	
Co	59	45	He	0.067	ppb	13.8	820.14	1	
Ni	60	45	He	0.067	ppb	17.4	294.46	1	
Cu	65	45	He	0.396	ppb	21.4	2040.77	1	
Zn	66	72	He	0.009	ppb	467.3	256.68	20	
As	75	72	He	0.074	ppb	52.9	69.67	1	
Se	78	72	He	0.210	ppb	78.2	56.67	1	
Rb	85	115	He	0.103	ppb	54.2	321.14	1	
Sr	88	115	He	0.115	ppb	41.9	515.63	1	
Mo	95	115	He	0.124	ppb	22.2	562.30	1	
Ag	107	115	He	0.107	ppb	40.9	1647.38	1	
Cd	111	115	He	0.097	ppb	53.5	193.34	1	
Sn	118	115	He	0.118	ppb	40.3	678.95	10	
Sb	121	115	He	0.203	ppb	18.4	1036.75	1	
Cs	133	115	He	0.099	ppb	31.7	976.87	1	
Ba	137	115	He	0.110	ppb	50.9	225.57	1	
Ce	140	115	He	0.089	ppb	13.4	2686.49	1	
Tl	205	159	He	0.079	ppb	12.8	2391.36	1	
Pb	208	159	He	0.044	ppb	59.3	3209.66	1	
Th	232	159	He	0.015	ppb	49.2	378.91	1	
U	238	159	He	0.088	ppb	64.5	3216.15	1	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	230971.20	0.2	222181.13	103.96	60	120	
Ge (IS)	72	He	186502.51	0.6	177648.1	104.98	60	120	
In-115 (IS)	115	He	1913294.75	1.1	1890884.26	101.19	60	120	
Tb-159 (IS)	159	He	6290719.61	0.1	6270485.31	100.32	60	120	

## Reporting Limit Check (CRI 2.0x)

Sample Name	CRI-6043375
File Name	094RL_2.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 19:09:10
Sample Type	RL_2
Total Dilution	1.0000
Comment	—
Location	1302

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	%Rec	%Low	%High	QC Flag
Be	9	45	He	0.907	ppb	5.4	55.00	1	90.7	50	150	
Al	27	45	He	19.950	ppb	2.3	2710.92	20	99.75	50	150	
V	51	45	He	1.986	ppb	3.2	10279.07	2	99.3	50	150	
Cr	52	45	He	1.968	ppb	0.6	13559.41	2	98.4	50	150	
Mn	55	45	He	1.927	ppb	2.2	6075.69	2	96.35	50	150	
Fe	56	45	He	42.290	ppb	5.0	225292.41	40	105.72	50	150	
Co	59	45	He	1.927	ppb	1.2	22636.94	2	96.35	50	150	
Ni	60	45	He	1.971	ppb	0.6	6460.30	2	98.55	50	150	
Cu	65	45	He	2.131	ppb	4.8	10024.65	2	106.55	50	150	
Zn	66	72	He	18.647	ppb	0.5	22545.72	20	93.23	50	150	
As	75	72	He	1.953	ppb	1.5	1470.74	2	97.65	50	150	
Se	78	72	He	1.936	ppb	7.9	132.67	2	96.8	50	150	
Rb	85	115	He	0.966	ppb	3.9	2875.85	1	96.6	50	150	
Sr	88	115	He	2.055	ppb	3.5	7934.37	2	102.75	50	150	
Mo	95	115	He	1.982	ppb	2.8	8498.04	2	99.1	50	150	
Ag	107	115	He	2.056	ppb	1.0	30444.96	2	102.8	50	150	
Cd	111	115	He	1.989	ppb	1.0	37884.49	2	99.45	50	150	
Sn	118	115	He	19.191	ppb	1.3	77149.73	20	95.95	50	150	
Sb	121	115	He	2.061	ppb	1.1	9132.92	2	103.05	50	150	
Cs	133	115	He	0.952	ppb	0.1	9229.67	1	95.2	50	150	
Ba	137	115	He	2.003	ppb	6.3	3473.78	2	100.15	50	150	
Ce	140	115	He	1.901	ppb	0.3	56334.75	2	95.05	50	150	
Tl	205	159	He	1.774	ppb	0.1	52563.55	2	88.7	50	150	
Pb	208	159	He	1.834	ppb	0.3	68687.84	2	91.7	50	150	
Th	232	159	He	1.882	ppb	1.2	29563.38	1	188.2	50	150	RL_2 Main CR1 Failed
U	238	159	He	1.798	ppb	1.0	65750.50	2	89.9	50	150	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	232631.13	1.1	222181.13	104.7	60	120	
Ge (IS)	72	He	184328.70	0.4	177648.1	103.76	60	120	
In-115 (IS)	115	He	1912323.24	0.8	1890884.26	101.13	60	120	
Tb-159 (IS)	159	He	6299578.50	0.5	6270485.31	100.46	60	120	

# Interference Check Solution A (ICS-A) Report

Sample Name	ICSA-6043376
File Name	095ICSA.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 19:11:13
Sample Type	ICSA
Total Dilution	1.0000
Comment	--
Location	1201

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	%Low	%High	QC Flag
Be	9	45	He	0.013	ppb	64.7	1.50	-0.5	100	100	
Al	27	45	He	94425.909	ppb	0.3	12688629.00	-100000	120	100	
V	51	45	He	0.044	ppb	21.1	423.34	-2	100	100	
Cr	52	45	He	0.279	ppb	3.4	2752.49	-2	100	100	
Mn	55	45	He	0.403	ppb	4.4	1438.97	-2	100	100	
Fe	56	45	He	89557.265	ppb	0.5	472786078.99	-100000	120	120	
Co	59	45	He	0.278	ppb	3.2	3379.28	-2	100	100	
Ni	60	45	He	0.295	ppb	8.8	1063.38	-2	100	100	
Cu	65	45	He	0.444	ppb	5.8	2337.99	-2	100	100	
Zn	66	72	He	0.288	ppb	8.3	590.02	-20	100	100	
As	75	72	He	0.056	ppb	15.6	55.67	-2	100	100	
Se	78	72	He	0.278	ppb	95.6	59.33	-2	100	100	
Rb	85	115	He	1.368	ppb	2.3	3918.31	-2	100	100	
Sr	88	115	He	0.854	ppb	2.7	3215.92	-2	100	100	
Mo	95	115	He	2075.654	ppb	0.4	8544059.10	-2000	120	120	
Ag	107	115	He	0.023	ppb	14.8	376.68	-2	100	100	
Cd	111	115	He	0.176	ppb	5.5	330.33	-2	100	100	
Sn	118	115	He	0.326	ppb	3.3	1456.75	-20	100	100	
Sb	121	115	He	0.194	ppb	5.5	961.15	-2	100	100	
Cs	133	115	He	0.021	ppb	16.2	215.56	-2	100	100	
Ba	137	115	He	0.164	ppb	13.9	306.67	-2	100	100	
Ce	140	115	He	0.014	ppb	20.2	442.24	-2	100	100	
Tl	205	159	He	0.007	ppb	30.0	273.35	-2	100	100	
Pb	208	159	He	0.038	ppb	6.7	2934.59	-2	100	100	
Th	232	159	He	0.043	ppb	26.5	797.81	-2	100	100	
U	238	159	He	0.008	ppb	45.7	316.70	-2	100	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	238927.56	2.4	222181.13	107.54	60	120	
Ge (IS)	72	He	184938.73	1.6	177648.1	104.1	60	120	
In-115 (IS)	115	He	1843153.08	1.2	1890884.26	97.48	60	120	
Tb-159 (IS)	159	He	6193373.64	0.4	6270485.31	98.77	60	120	

# Interference Check Solution AB (ICS-AB) Report

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<b>Sample Name</b>	ICSAB-6043377
<b>File Name</b>	096ICSB.d
<b>Data Path Name</b>	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
<b>Acq Time</b>	2020-01-14 19:13:19
<b>Sample Type</b>	ICSB
<b>Total Dilution</b>	1.0000
<b>Comment</b>	—
<b>Location</b>	1202

**QC Analyte Table**

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	%Low	%High	QC Flag
Be	9	45	He	16.925	ppb	2.9	1150.54	20	80	120	
Al	27	45	He	95596.229	ppb	0.5	14200024.33	100000	80	120	
V	51	45	He	18.713	ppb	0.5	108168.20	20	80	120	
Cr	52	45	He	18.298	ppb	0.8	134786.78	20	80	120	
Mn	55	45	He	18.584	ppb	0.8	64935.71	20	80	120	
Fe	56	45	He	88577.124	ppb	0.8	516922948.35	100200	80	120	
Co	59	45	He	17.872	ppb	0.2	237973.58	20	80	120	
Ni	60	45	He	17.176	ppb	0.9	63225.48	20	80	120	
Cu	65	45	He	17.162	ppb	1.5	89765.99	20	80	120	
Zn	66	72	He	17.569	ppb	1.6	22857.32	20	80	120	
As	75	72	He	19.140	ppb	1.5	15369.18	20	80	120	
Se	78	72	He	19.483	ppb	3.2	980.70	20	80	120	
Rb	85	115	He	22.267	ppb	1.2	66490.75	20	80	120	
Sr	88	115	He	21.796	ppb	0.3	84091.82	20	80	120	
Mo	95	115	He	2112.033	ppb	0.2	9092598.81	2020	80	120	
Ag	107	115	He	18.131	ppb	0.9	270210.29	20	80	120	
Cd	111	115	He	18.348	ppb	0.7	35171.00	20	80	120	
Sn	118	115	He	19.551	ppb	0.8	79217.39	20	80	120	
Sb	121	115	He	20.048	ppb	0.4	88248.26	20	80	120	
Cs	133	115	He	19.245	ppb	0.1	187841.54	20	80	120	
Ba	137	115	He	19.078	ppb	2.0	33044.54	20	80	120	
Ce	140	115	He	17.572	ppb	0.6	524587.31	20	80	120	
Tl	205	159	He	16.384	ppb	1.1	483298.85	20	80	120	
Pb	208	159	He	17.080	ppb	0.9	624211.83	20	80	120	
Th	232	159	He	0.373	ppb	2.1	5959.11	20	80	120	> +/- 10%
U	238	159	He	17.145	ppb	0.9	624811.61	20	80	120	

**QC ISTD Table**

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	264124.12	1.6	222181.13	118.88	60	120	
Ge (IS)	72	He	198251.06	1.9	177648.1	111.6	60	120	
In-115 (IS)	115	He	1927656.47	0.5	1890884.26	101.94	60	120	
Tb-159 (IS)	159	He	6278565.59	0.7	6270485.31	100.13	60	120	

# Sample Report

Sample Name	RINSE
File Name	097SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 19:15:25
Sample Type	Sample
Total Dilution	1.0000
Comment	—
Location	1

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	0.027	ppb	55.8	2.67	1000	
Al	27	45	He	173.976	ppb	8.9	26249.13	5000	
V	51	45	He	0.062	ppb	21.8	578.92	5000	
Cr	52	45	He	0.066	ppb	24.2	1500.09	5000	
Mn	55	45	He	0.031	ppb	79.0	297.79	4000	
Fe	56	45	He	183.021	ppb	32.9	1092610.35	30000	
Co	59	45	He	0.034	ppb	35.0	494.49	5000	
Ni	60	45	He	0.037	ppb	11.2	228.89	5000	
Cu	65	45	He	0.116	ppb	18.9	885.61	5000	
Zn	66	72	He	0.014	ppb	192.3	293.34	5000	
As	75	72	He	0.040	ppb	34.9	49.00	5000	
Se	78	72	He	0.171	ppb	90.0	61.33	5000	
Rb	85	115	He	0.050	ppb	29.8	173.34	100	
Sr	88	115	He	0.041	ppb	44.6	247.79	5000	
Mo	95	115	He	4.646	ppb	17.7	21369.14	3000	
Ag	107	115	He	0.037	ppb	10.2	643.40	100	
Cd	111	115	He	0.027	ppb	30.2	63.00	5000	
Sn	118	115	He	0.040	ppb	24.2	393.34	2000	
Sb	121	115	He	0.015	ppb	31.3	233.34	5000	
Cs	133	115	He	0.022	ppb	57.7	243.35	100	
Ba	137	115	He	0.022	ppb	64.2	80.00	5000	
Ce	140	115	He	0.023	ppb	42.9	780.12	2000	
Tl	205	159	He	0.027	ppb	31.3	887.90	5000	
Pb	208	159	He	-0.007	ppb	N/A	1385.68	5000	
Th	232	159	He	0.001	ppb	196.7	156.67	100	
U	238	159	He	0.023	ppb	26.2	893.52	5000	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	267211.67	1.6	222181.13	120.27	60	120	ISTD Failed
Ge (IS)	72	He	208345.75	1.1	177648.1	117.28	60	120	
In-115 (IS)	115	He	2055512.72	1.0	1890884.26	108.71	60	120	
Tb-159 (IS)	159	He	6392096.41	1.5	6270485.31	101.94	60	120	

# Sample Report

Sample Name	RINSE
File Name	098SMPL.d
Data Path Name	D:\Agilent\CPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 19:17:32
Sample Type	Sample
Total Dilution	1.0000
Comment	—
Location	1

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	0.011	ppb	118.1	1.50	1000	
Al	27	45	He	62.051	ppb	43.6	9036.26	5000	
V	51	45	He	0.039	ppb	29.3	424.45	5000	
Cr	52	45	He	0.047	ppb	27.2	1296.73	5000	
Mn	55	45	He	-0.001	ppb	N/A	175.56	4000	
Fe	56	45	He	48.967	ppb	27.2	284508.08	30000	
Co	59	45	He	0.008	ppb	42.8	142.22	5000	
Ni	60	45	He	0.025	ppb	13.4	176.67	5000	
Cu	65	45	He	0.089	ppb	23.3	704.48	5000	
Zn	66	72	He	-0.012	ppb	N/A	247.78	5000	
As	75	72	He	0.007	ppb	47.8	20.67	5000	
Se	78	72	He	0.155	ppb	29.5	58.00	5000	
Rb	85	115	He	0.009	ppb	28.8	41.11	100	
Sr	88	115	He	0.005	ppb	143.8	95.56	5000	
Mo	95	115	He	0.892	ppb	19.4	4045.45	3000	
Ag	107	115	He	0.010	ppb	31.9	217.78	100	
Cd	111	115	He	0.007	ppb	30.5	22.00	5000	
Sn	118	115	He	0.027	ppb	24.4	330.01	2000	
Sb	121	115	He	0.002	ppb	279.0	166.67	5000	
Cs	133	115	He	0.010	ppb	73.1	115.56	100	
Ba	137	115	He	0.017	ppb	42.6	68.89	5000	
Ce	140	115	He	0.008	ppb	44.7	298.92	2000	
Tl	205	159	He	0.008	ppb	42.2	308.91	5000	
Pb	208	159	He	-0.031	ppb	N/A	457.79	5000	
Th	232	159	He	-0.001	ppb	N/A	125.56	100	
U	238	159	He	0.007	ppb	20.0	276.70	5000	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	254850.75	1.4	222181.13	114.7	60	120	
Ge (IS)	72	He	199522.26	0.8	177648.1	112.31	60	120	
In-115 (IS)	115	He	2014002.28	1.7	1890884.26	106.51	60	120	
Tb-159 (IS)	159	He	6351424.33	1.6	6270485.31	101.29	60	120	

# Sample Report

Sample Name	RINSE
File Name	099SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 20:07:23
Sample Type	Sample
Total Dilution	1.0000
Comment	—
Location	1

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	-0.009	ppb	N/A	0.17	1000	
Al	27	45	He	-0.057	ppb	N/A	92.67	5000	
V	51	45	He	0.017	ppb	53.4	275.56	5000	
Cr	52	45	He	0.038	ppb	15.2	1124.49	5000	
Mn	55	45	He	-0.012	ppb	N/A	126.67	4000	
Fe	56	45	He	-0.182	ppb	N/A	6931.62	30000	
Co	59	45	He	0.000	ppb	N/A	31.11	5000	
Ni	60	45	He	0.015	ppb	19.6	128.89	5000	
Cu	65	45	He	0.007	ppb	142.8	267.78	5000	
Zn	66	72	He	0.003	ppb	1664.1	246.67	5000	
As	75	72	He	0.001	ppb	162.5	14.33	5000	
Se	78	72	He	0.096	ppb	91.2	51.00	5000	
Rb	85	115	He	-0.002	ppb	N/A	8.89	100	
Sr	88	115	He	-0.003	ppb	N/A	62.22	5000	
Mo	95	115	He	0.012	ppb	72.8	85.56	3000	
Ag	107	115	He	-0.001	ppb	N/A	42.22	100	
Cd	111	115	He	-0.003	ppb	N/A	1.00	5000	
Sn	118	115	He	0.021	ppb	32.7	290.00	2000	
Sb	121	115	He	-0.019	ppb	N/A	70.00	5000	
Cs	133	115	He	-0.001	ppb	N/A	5.56	100	
Ba	137	115	He	-0.003	ppb	N/A	31.11	5000	
Ce	140	115	He	-0.001	ppb	N/A	18.89	2000	
Tl	205	159	He	-0.001	ppb	N/A	31.11	5000	
Pb	208	159	He	-0.040	ppb	N/A	148.89	5000	
Th	232	159	He	-0.001	ppb	N/A	132.22	100	
U	238	159	He	0.000	ppb	N/A	6.67	5000	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	231469.53	1.1	222181.13	104.18	60	120	
Ge (IS)	72	He	184413.19	1.3	177648.1	103.81	60	120	
In-115 (IS)	115	He	1932553.62	0.9	1890884.26	102.2	60	120	
Tb-159 (IS)	159	He	6325474.75	0.5	6270485.31	100.88	60	120	

# Continuing Calibration Verification (CCV) Report

Sample Name	CCV-6043373
File Name	100_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 20:09:27
Sample Type	CCV
Total Dilution	1.0000
Comment	—
Location	1206

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Be	9	45	He	47.455	ppb	0.8	2806.08	50	94.91	90	110	
Al	27	45	He	48.897	ppb	0.7	6418.67	50	97.79	90	110	
V	51	45	He	49.006	ppb	0.6	246156.80	50	98.01	90	110	
Cr	52	45	He	49.049	ppb	0.6	312891.81	50	98.1	90	110	
Mn	55	45	He	48.820	ppb	0.8	148153.13	50	97.64	90	110	
Fe	56	45	He	484.430	ppb	0.5	2467598.03	500	96.89	90	110	
Co	59	45	He	48.639	ppb	0.6	563386.21	50	97.28	90	110	
Ni	60	45	He	48.466	ppb	0.8	155072.65	50	96.93	90	110	
Cu	65	45	He	48.522	ppb	0.6	220397.00	50	97.04	90	110	
Zn	66	72	He	47.817	ppb	1.7	58264.01	50	95.63	90	110	
As	75	72	He	48.204	ppb	1.0	36495.11	50	96.41	90	110	
Se	78	72	He	48.656	ppb	2.2	2240.17	50	97.31	90	110	
Rb	85	115	He	49.354	ppb	1.2	147753.07	50	98.71	90	110	
Sr	88	115	He	49.335	ppb	0.9	190759.88	50	98.67	90	110	
Mo	95	115	He	48.741	ppb	0.4	210443.27	50	97.48	90	110	
Ag	107	115	He	48.980	ppb	1.1	731813.76	50	97.96	90	110	
Cd	111	115	He	48.656	ppb	0.7	93509.72	50	97.31	90	110	
Sn	118	115	He	48.710	ppb	0.7	197595.31	50	97.42	90	110	
Sb	121	115	He	49.367	ppb	0.9	217674.82	50	98.73	90	110	
Cs	133	115	He	48.347	ppb	0.6	473146.32	50	96.69	90	110	
Ba	137	115	He	48.113	ppb	0.8	83508.74	50	96.23	90	110	
Ce	140	115	He	45.733	ppb	0.9	1368887.27	50	91.47	90	110	
Tl	205	159	He	44.808	ppb	1.5	1342819.67	50	89.62	90	110	> +/- 10%
Pb	208	159	He	47.050	ppb	1.1	1744184.34	50	94.1	90	110	
Th	232	159	He	17.697	ppb	0.3	280292.87	50	35.39	90	110	> +/- 10%
U	238	159	He	48.093	ppb	0.7	1780822.37	50	96.19	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	229791.17	0.9	222181.13	103.43	60	120	
Ge (IS)	72	He	186999.81	0.4	177648.1	105.26	60	120	
In-115 (IS)	115	He	1932934.02	0.9	1890884.26	102.22	60	120	
Tb-159 (IS)	159	He	6379169.05	0.5	6270485.31	101.73	60	120	

# Continuing Calibration Blank (CCB) Report

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**Sample Name** CCB-6043371  
**File Name** 101\_CCB.d  
**Data Path Name** D:\Agilent\ICPMH\1\DATA\200114-2LL.b  
**Acq Time** 2020-01-14 20:11:30  
**Sample Type** CCB  
**Total Dilution** 1.0000  
**Comment** —  
**Location** 1207

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Be	9	45	He	0.076	ppb	74.5	5.17	0.5	
Al	27	45	He	0.099	ppb	84.8	111.33	10	
V	51	45	He	0.084	ppb	43.7	602.27	1	
Cr	52	45	He	0.062	ppb	62.4	1253.44	1	
Mn	55	45	He	0.036	ppb	75.5	268.90	1	
Fe	56	45	He	0.008	ppb	1736.5	7791.80	20	
Co	59	45	He	0.060	ppb	8.7	723.48	1	
Ni	60	45	He	0.057	ppb	16.7	258.91	1	
Cu	65	45	He	0.065	ppb	21.9	524.47	1	
Zn	66	72	He	0.105	ppb	26.7	371.12	20	
As	75	72	He	0.082	ppb	27.6	75.00	1	
Se	78	72	He	0.338	ppb	47.8	62.00	1	
Rb	85	115	He	0.071	ppb	21.7	223.35	1	
Sr	88	115	He	0.074	ppb	13.8	354.47	1	
Mo	95	115	He	0.097	ppb	5.4	440.03	1	
Ag	107	115	He	0.077	ppb	17.2	1188.06	1	
Cd	111	115	He	0.068	ppb	16.0	135.67	1	
Sn	118	115	He	0.079	ppb	14.2	515.58	10	
Sb	121	115	He	0.162	ppb	12.1	848.93	1	
Cs	133	115	He	0.077	ppb	36.1	754.56	1	
Ba	137	115	He	0.059	ppb	44.1	135.56	1	
Ce	140	115	He	0.077	ppb	16.6	2306.60	1	
Tl	205	159	He	0.097	ppb	18.0	2932.03	1	
Pb	208	159	He	0.068	ppb	40.6	4051.35	1	
Th	232	159	He	0.055	ppb	14.7	988.99	1	
U	238	159	He	0.080	ppb	43.4	2918.83	1	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	228176.49	0.3	222181.13	102.7	60	120	
Ge (IS)	72	He	185266.07	0.7	177648.1	104.29	60	120	
In-115 (IS)	115	He	1895967.09	0.5	1890884.26	100.27	60	120	
Tb-159 (IS)	159	He	6267417.25	0.3	6270485.31	99.95	60	120	

# Method Blank (MB) Report

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Sample Name	mb 440-590387_1-a@20
File Name	102_PB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 20:28:10
Sample Type	MB
Total Dilution	1.0000
Comment	CAM SOIL 440-590387 MP
Location	3303

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Be	9	45	He	-0.009	ppb	N/A	0.17	0.5	
Al	27	45	He	1.778	ppb	4.9	338.00	10	
V	51	45	He	0.043	ppb	41.2	411.12	1	
Cr	52	45	He	0.078	ppb	10.4	1407.85	1	
Mn	55	45	He	0.583	ppb	7.5	1981.25	1	
Fe	56	45	He	4.063	ppb	0.4	29208.04	20	
Co	59	45	He	0.002	ppb	85.3	62.22	1	
Ni	60	45	He	0.044	ppb	22.8	224.45	1	
Cu	65	45	He	0.847	ppb	2.5	4187.27	1	
Zn	66	72	He	0.773	ppb	6.8	1185.61	20	
As	75	72	He	0.007	ppb	122.4	19.00	1	
Se	78	72	He	0.147	ppb	137.9	54.00	1	
Rb	85	115	He	0.001	ppb	300.8	17.78	1	
Sr	88	115	He	0.022	ppb	11.6	158.89	1	
Mo	95	115	He	0.026	ppb	9.4	144.45	1	
Ag	107	115	He	0.000	ppb	N/A	47.78	1	
Cd	111	115	He	0.001	ppb	218.2	9.33	1	
Sn	118	115	He	1.100	ppb	1.3	4652.99	10	
Sb	121	115	He	-0.006	ppb	N/A	125.56	1	
Cs	133	115	He	-0.001	ppb	N/A	7.78	1	
Ba	137	115	He	0.140	ppb	4.1	277.78	1	
Ce	140	115	He	0.002	ppb	18.1	108.89	1	
Tl	205	159	He	-0.001	ppb	N/A	41.11	1	
Pb	208	159	He	0.058	ppb	3.1	3682.44	1	
Th	232	159	He	0.012	ppb	63.8	328.89	1	
U	238	159	He	0.001	ppb	83.8	56.67	1	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	236012.71	1.1	222181.13	106.23	60	120	
Ge (IS)	72	He	187106.01	0.5	177648.1	105.32	60	120	
In-115 (IS)	115	He	1927864.78	0.2	1890884.26	101.96	60	120	
Tb-159 (IS)	159	He	6247217.81	0.9	6270485.31	99.63	60	120	

# Sample Report

Sample Name	Ics 440-590387_2-a@20
File Name	103SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 20:30:14
Sample Type	Sample
Total Dilution	1.0000
Comment	CAM SOIL 440-590387 MP
Location	3304

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	84.289	ppb	0.7	5160.01	1000	
Al	27	45	He	89.730	ppb	0.7	12108.73	5000	
V	51	45	He	89.185	ppb	0.5	463659.39	5000	
Cr	52	45	He	88.806	ppb	0.3	585821.87	5000	
Mn	55	45	He	88.895	ppb	0.4	279170.24	4000	
Fe	56	45	He	89.516	ppb	0.8	478654.58	30000	
Co	59	45	He	89.138	ppb	0.4	1068962.15	5000	
Ni	60	45	He	88.747	ppb	0.8	293931.97	5000	
Cu	65	45	He	89.708	ppb	0.2	421675.71	5000	
Zn	66	72	He	87.684	ppb	1.1	108701.41	5000	
As	75	72	He	89.545	ppb	1.0	69092.88	5000	
Se	78	72	He	88.140	ppb	2.0	4097.23	5000	
Rb	85	115	He	0.010	ppb	16.5	44.44	100	
Sr	88	115	He	93.320	ppb	1.1	359816.61	5000	
Mo	95	115	He	90.145	ppb	0.8	388150.48	3000	
Ag	107	115	He	47.460	ppb	1.3	707239.85	100	
Cd	111	115	He	90.024	ppb	1.1	172550.73	5000	
Sn	118	115	He	91.510	ppb	0.6	370067.53	2000	
Sb	121	115	He	93.428	ppb	0.9	410719.46	5000	
Cs	133	115	He	0.000	ppb	N/A	14.44	100	
Ba	137	115	He	92.943	ppb	1.0	160858.96	5000	
Ce	140	115	He	0.005	ppb	18.6	207.78	2000	
Tl	205	159	He	88.747	ppb	0.7	2631312.53	5000	
Pb	208	159	He	88.137	ppb	1.8	3231033.71	5000	
Th	232	159	He	0.050	ppb	29.1	921.15	100	
U	238	159	He	0.001	ppb	20.8	46.67	5000	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	237910.94	0.6	222181.13	107.08	60	120	
Ge (IS)	72	He	190613.68	0.3	177648.1	107.3	60	120	
In-115 (IS)	115	He	1927916.34	1.2	1890884.26	101.96	60	120	
Tb-159 (IS)	159	He	6311105.44	0.7	6270485.31	100.65	60	120	

# Sample Report

Sample Name	440-258909-b-43-a@20
File Name	104SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 20:32:19
Sample Type	Sample
Total Dilution	1.0000
Comment	CAM SOIL 440-590387 MP
Location	3305

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	0.517	ppb	15.4	33.17	1000	
Al	27	45	He	10765.679	ppb	0.5	1476834.67	5000	>LDR
V	51	45	He	38.109	ppb	0.7	203224.34	5000	
Cr	52	45	He	12.841	ppb	1.4	87629.36	5000	
Mn	55	45	He	202,296	ppb	0.8	651081.61	4000	
Fe	56	45	He	26110.382	ppb	0.9	140723945.52	30000	
Co	59	45	He	10.236	ppb	2.0	125874.30	5000	
Ni	60	45	He	14.462	ppb	1.7	49171.71	5000	
Cu	65	45	He	2185.586	ppb	1.0	10526068.75	5000	
Zn	66	72	He	33.515	ppb	0.6	42338.00	5000	
As	75	72	He	2.273	ppb	2.8	1794.45	5000	
Se	78	72	He	3.788	ppb	3.6	225.67	5000	
Rb	85	115	He	10.812	ppb	0.9	32225.86	100	
Sr	88	115	He	43.746	ppb	0.8	168349.68	5000	
Mo	95	115	He	2.733	ppb	2.9	11773.66	3000	
Ag	107	115	He	0.300	ppb	13.7	4508.68	100	
Cd	111	115	He	0.210	ppb	35.8	409.02	5000	
Sn	118	115	He	2.372	ppb	3.9	9773.37	2000	
Sb	121	115	He	0.522	ppb	15.7	2441.38	5000	
Cs	133	115	He	1.112	ppb	1.6	10849.67	100	
Ba	137	115	He	68.504	ppb	1.2	118321.62	5000	
Ce	140	115	He	22.680	ppb	1.2	675634.16	2000	
Tl	205	159	He	0.213	ppb	31.3	6402.97	5000	
Pb	208	159	He	2.185	ppb	3.7	81762.45	5000	
Th	232	159	He	23.910	ppb	1.0	374949.67	100	
U	238	159	He	6.196	ppb	0.6	227207.48	5000	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	243897.87	0.3	222181.13	109.77	60	120	
Ge (IS)	72	He	193511.92	0.0	177648.1	108.93	60	120	
In-115 (IS)	115	He	1923637.79	0.5	1890884.26	101.73	60	120	
Tb-159 (IS)	159	He	6316665.58	0.5	6270485.31	100.74	60	120	

# Sample Report

Sample Name	440-258909-b-43-b ms@20
File Name	105SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 20:34:26
Sample Type	Sample
Total Dilution	1.0000
Comment	CAM SOIL 440-590387 MP
Location	3306

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	81.522	ppb	1.9	5086.99	1000	
Al	27	45	He	12253.520	ppb	0.4	1671289.29	5000	>LDR
V	51	45	He	122.559	ppb	0.5	649378.72	5000	
Cr	52	45	He	98.460	ppb	0.6	661915.98	5000	
Mn	55	45	He	295.526	ppb	0.9	945602.05	4000	
Fe	56	45	He	28623.711	ppb	0.9	153385638.35	30000	>LDR
Co	59	45	He	96.822	ppb	0.4	1183504.02	5000	
Ni	60	45	He	99.730	ppb	0.7	336665.53	5000	
Cu	65	45	He	2627.334	ppb	1.0	12581251.44	5000	
Zn	66	72	He	118.675	ppb	0.5	147881.68	5000	
As	75	72	He	91.342	ppb	0.8	70884.77	5000	
Se	78	72	He	91.627	ppb	1.6	4281.61	5000	
Rb	85	115	He	12.607	ppb	2.0	37335.55	100	
Sr	88	115	He	136.733	ppb	0.3	522708.16	5000	
Mo	95	115	He	93.222	ppb	0.6	397990.72	3000	
Ag	107	115	He	47.091	ppb	0.2	695816.90	100	
Cd	111	115	He	90.170	ppb	0.4	171367.47	5000	
Sn	118	115	He	92.768	ppb	0.9	371962.16	2000	
Sb	121	115	He	70.394	ppb	0.5	306873.58	5000	
Cs	133	115	He	1.205	ppb	3.9	11679.23	100	
Ba	137	115	He	177.034	ppb	1.0	303770.75	5000	
Ce	140	115	He	23.690	ppb	1.0	701252.84	2000	
Tl	205	159	He	87.174	ppb	1.5	2580473.86	5000	
Pb	208	159	He	90.482	ppb	1.2	3311846.22	5000	
Th	232	159	He	23.969	ppb	0.9	374950.09	100	
U	238	159	He	4.616	ppb	1.8	168842.81	5000	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	242496.01	0.4	222181.13	109.14	60	120	
Ge (IS)	72	He	191716.38	1.0	177648.1	107.92	60	120	
In-115 (IS)	115	He	1911438.25	0.2	1890884.26	101.09	60	120	
Tb-159 (IS)	159	He	6301491.00	1.0	6270485.31	100.49	60	120	

# Sample Report

Sample Name	440-258909-b-43-c msd@20
File Name	106SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 20:36:31
Sample Type	Sample
Total Dilution	1.0000
Comment	CAM SOIL 440-590387 MP
Location	3307

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	81.193	ppb	2.0	5052.81	1000	
Al	27	45	He	13302.659	ppb	0.9	1809544.63	5000	>LDR
V	51	45	He	126.863	ppb	0.8	670391.80	5000	
Cr	52	45	He	99.227	ppb	0.8	665287.37	5000	
Mn	55	45	He	299.388	ppb	0.4	955401.87	4000	
Fe	56	45	He	28455.018	ppb	1.1	152074469.51	30000	>LDR
Co	59	45	He	96.853	ppb	0.5	1180733.88	5000	
Ni	60	45	He	99.883	ppb	0.4	336289.50	5000	
Cu	65	45	He	2400.072	ppb	0.7	11462282.88	5000	
Zn	66	72	He	120.016	ppb	1.1	148807.19	5000	
As	75	72	He	91.542	ppb	1.5	70688.90	5000	
Se	78	72	He	90.052	ppb	1.3	4188.59	5000	
Rb	85	115	He	13.837	ppb	0.7	40762.26	100	
Sr	88	115	He	147.260	ppb	0.7	559994.76	5000	
Mo	95	115	He	93.967	ppb	0.4	399065.93	3000	
Ag	107	115	He	47.499	ppb	0.7	698158.56	100	
Cd	111	115	He	90.680	ppb	0.8	171433.31	5000	
Sn	118	115	He	94.129	ppb	0.7	375436.37	2000	
Sb	121	115	He	70.396	ppb	0.8	305274.97	5000	
Cs	133	115	He	1.195	ppb	0.4	11522.41	100	
Ba	137	115	He	189.967	ppb	0.4	324253.01	5000	
Ce	140	115	He	24.303	ppb	0.3	715630.13	2000	
Tl	205	159	He	87.183	ppb	0.8	2578071.70	5000	
Pb	208	159	He	90.607	ppb	0.6	3312921.06	5000	
Th	232	159	He	24.620	ppb	0.9	384714.88	100	
U	238	159	He	5.155	ppb	0.8	188347.41	5000	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	241852.59	0.1	222181.13	108.85	60	120	
Ge (IS)	72	He	190776.86	1.1	177648.1	107.39	60	120	
In-115 (IS)	115	He	1901410.58	0.1	1890884.26	100.56	60	120	
Tb-159 (IS)	159	He	6294399.34	0.3	6270485.31	100.38	60	120	

# Sample Report

Sample Name	440-258909-b-43-a PDS@20
File Name	107SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 20:38:37
Sample Type	Sample
Total Dilution	1.0000
Comment	CAM SOIL 440-590387 MP
Location	3308

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	86.258	ppb	0.9	5267.38	1000	
Al	27	45	He	10927.432	ppb	0.9	1458625.83	5000	>LDR
V	51	45	He	131.753	ppb	0.9	683183.84	5000	
Cr	52	45	He	105.625	ppb	0.6	694868.31	5000	
Mn	55	45	He	297.971	ppb	0.5	933075.17	4000	
Fe	56	45	He	27272.322	ppb	0.9	143024852.09	30000	>LDR
Co	59	45	He	102.106	ppb	0.5	1221468.22	5000	
Ni	60	45	He	105.288	ppb	0.7	347842.07	5000	
Cu	65	45	He	2283.859	ppb	0.8	10703013.74	5000	
Zn	66	72	He	122.784	ppb	1.0	151906.55	5000	
As	75	72	He	95.848	ppb	0.6	73857.35	5000	
Se	78	72	He	94.364	ppb	0.4	4377.31	5000	
Rb	85	115	He	111.184	ppb	0.5	325274.24	100	>LDR
Sr	88	115	He	144.784	ppb	1.0	546946.70	5000	
Mo	95	115	He	100.962	ppb	1.1	425941.07	3000	
Ag	107	115	He	97.106	ppb	0.3	1417845.22	100	>LDR
Cd	111	115	He	95.228	ppb	0.4	178844.49	5000	
Sn	118	115	He	100.354	ppb	0.7	397609.51	2000	
Sb	121	115	He	100.107	ppb	1.1	431189.06	5000	
Cs	133	115	He	98.639	ppb	0.6	943339.86	100	
Ba	137	115	He	167.519	ppb	0.8	284052.78	5000	
Ce	140	115	He	117.565	ppb	1.6	3438817.57	2000	
Tl	205	159	He	93.298	ppb	0.5	2742527.94	5000	
Pb	208	159	He	95.915	ppb	0.4	3486011.96	5000	
Th	232	159	He	26.420	ppb	0.5	410368.98	100	
U	238	159	He	100.003	ppb	0.5	3631958.17	5000	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	237322.72	0.1	222181.13	106.81	60	120	
Ge (IS)	72	He	190365.73	1.1	177648.1	107.16	60	120	
In-115 (IS)	115	He	1888878.38	0.2	1890884.26	99.89	60	120	
Tb-159 (IS)	159	He	6256984.34	0.7	6270485.31	99.78	60	120	

# Sample Report

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<b>Sample Name</b>	440-258909-b-43-a SD@100
<b>File Name</b>	108SMPL.d
<b>Data Path Name</b>	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
<b>Acq Time</b>	2020-01-14 20:44:36
<b>Sample Type</b>	Sample
<b>Total Dilution</b>	1.0000
<b>Comment</b>	CAM SOIL 440-590387 MP
<b>Location</b>	3309

**QC Analyte Table**

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	0.117	ppb	17.5	8.00	1000	
Al	27	45	He	2120.537	ppb	1.0	287558.86	5000	
V	51	45	He	7.606	ppb	0.3	40241.80	5000	
Cr	52	45	He	2.577	ppb	0.9	18110.78	5000	
Mn	55	45	He	41.037	ppb	1.0	130651.24	4000	
Fe	56	45	He	5314.148	ppb	0.7	28310754.43	30000	
Co	59	45	He	2.077	ppb	0.7	25275.53	5000	
Ni	60	45	He	3.013	ppb	0.8	10190.14	5000	
Cu	65	45	He	447.757	ppb	0.4	2131343.32	5000	
Zn	66	72	He	7.836	ppb	1.5	10001.13	5000	
As	75	72	He	0.429	ppb	4.4	347.00	5000	
Se	78	72	He	0.761	ppb	41.0	83.67	5000	
Rb	85	115	He	2.161	ppb	1.2	6535.90	100	
Sr	88	115	He	8.692	ppb	0.7	33954.23	5000	
Mo	95	115	He	0.512	ppb	3.4	2263.52	3000	
Ag	107	115	He	0.057	ppb	14.2	910.05	100	
Cd	111	115	He	0.030	ppb	37.7	65.67	5000	
Sn	118	115	He	0.475	ppb	1.4	2150.17	2000	
Sb	121	115	He	0.156	ppb	16.4	846.70	5000	
Cs	133	115	He	0.236	ppb	10.6	2346.88	100	
Ba	137	115	He	13.867	ppb	1.4	24298.28	5000	
Ce	140	115	He	4.547	ppb	1.1	137311.18	2000	
Tl	205	159	He	0.049	ppb	19.3	1529.17	5000	
Pb	208	159	He	0.423	ppb	2.4	17231.14	5000	
Th	232	159	He	4.671	ppb	1.0	73799.12	100	
U	238	159	He	1.254	ppb	1.2	46253.17	5000	

**QC ISTD Table**

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	241032.06	0.7	222181.13	108.48	60	120	
Ge (IS)	72	He	191727.25	0.6	177648.1	107.93	60	120	
In-115 (IS)	115	He	1949297.88	0.8	1890884.26	103.09	60	120	
Tb-159 (IS)	159	He	6353771.97	0.5	6270485.31	101.33	60	120	

# Continuing Calibration Verification (CCV) Report

Sample Name	CCV-6043373
File Name	109_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 20:46:40
Sample Type	CCV
Total Dilution	1.0000
Comment	—
Location	1206

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Be	9	45	He	46.170	ppb	1.2	2852.26	50	92.34	90	110	
Al	27	45	He	52.171	ppb	3.0	7147.69	50	104.34	90	110	
V	51	45	He	48.720	ppb	1.3	255666.66	50	97.44	90	110	
Cr	52	45	He	48.768	ppb	1.2	325014.74	50	97.54	90	110	
Mn	55	45	He	49.108	ppb	1.5	155695.22	50	98.22	90	110	
Fe	56	45	He	484.587	ppb	1.1	2578634.14	500	96.92	90	110	
Co	59	45	He	48.648	ppb	1.0	588692.55	50	97.3	90	110	
Ni	60	45	He	48.312	ppb	1.4	161495.36	50	96.62	90	110	
Cu	65	45	He	49.005	ppb	1.3	232541.54	50	98.01	90	110	
Zn	66	72	He	48.014	ppb	0.6	60670.25	50	96.03	90	110	
As	75	72	He	48.686	ppb	0.5	38223.38	50	97.37	90	110	
Se	78	72	He	49.016	ppb	1.7	2339.52	50	98.03	90	110	
Rb	85	115	He	50.897	ppb	0.9	155576.03	50	101.79	90	110	
Sr	88	115	He	50.776	ppb	0.4	200457.28	50	101.55	90	110	
Mo	95	115	He	49.561	ppb	0.5	218471.34	50	99.12	90	110	
Ag	107	115	He	49.698	ppb	0.6	758142.99	50	99.4	90	110	
Cd	111	115	He	49.430	ppb	0.8	96991.18	50	98.86	90	110	
Sn	118	115	He	49.563	ppb	1.0	205267.84	50	99.13	90	110	
Sb	121	115	He	50.496	ppb	1.0	227314.99	50	100.99	90	110	
Cs	133	115	He	49.409	ppb	0.7	493687.29	50	98.82	90	110	
Ba	137	115	He	49.512	ppb	1.0	87737.91	50	99.02	90	110	
Ce	140	115	He	46.186	ppb	0.9	1411445.50	50	92.37	90	110	
Tl	205	159	He	45.647	ppb	0.3	1375209.84	50	91.29	90	110	
Pb	208	159	He	47.845	ppb	0.3	1783036.22	50	95.69	90	110	
Th	232	159	He	16.865	ppb	1.0	268535.67	50	33.73	90	110	> +/- 10%
U	238	159	He	47.284	ppb	2.7	1760079.19	50	94.57	90	110	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	240061.44	0.3	222181.13	108.05	60	120	
Ge (IS)	72	He	193912.92	0.8	177648.1	109.16	60	120	
In-115 (IS)	115	He	1973480.84	0.7	1890884.26	104.37	60	120	
Tb-159 (IS)	159	He	6412732.66	0.2	6270485.31	102.27	60	120	

# Continuing Calibration Blank (CCB) Report

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**Sample Name** CCB-6043371  
**File Name** 110\_CCB.d  
**Data Path Name** D:\Agilent\ICPMH\1\DATA\200114-2LL.b  
**Acq Time** 2020-01-14 20:48:44  
**Sample Type** CCB  
**Total Dilution** 1.0000  
**Comment** —  
**Location** 1207

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Be	9	45	He	0.073	ppb	22.6	5.17	0.5	
Al	27	45	He	1.979	ppb	52.8	366.02	10	
V	51	45	He	0.085	ppb	36.8	630.05	1	
Cr	52	45	He	0.074	ppb	40.0	1382.34	1	
Mn	55	45	He	0.097	ppb	10.2	468.92	1	
Fe	56	45	He	4.559	ppb	1.4	31885.53	20	
Co	59	45	He	0.075	ppb	11.1	929.06	1	
Ni	60	45	He	0.057	ppb	7.9	271.12	1	
Cu	65	45	He	0.388	ppb	23.1	2056.35	1	
Zn	66	72	He	0.102	ppb	31.2	380.01	20	
As	75	72	He	0.055	ppb	92.6	56.67	1	
Se	78	72	He	0.342	ppb	92.8	64.33	1	
Rb	85	115	He	0.090	ppb	53.4	284.47	1	
Sr	88	115	He	0.091	ppb	48.9	428.93	1	
Mo	95	115	He	0.126	ppb	32.6	575.62	1	
Ag	107	115	He	0.105	ppb	30.3	1628.33	1	
Cd	111	115	He	0.082	ppb	19.0	164.67	1	
Sn	118	115	He	0.096	ppb	33.7	596.71	10	
Sb	121	115	He	0.171	ppb	10.9	908.94	1	
Cs	133	115	He	0.070	ppb	50.5	709.03	1	
Ba	137	115	He	0.063	ppb	41.1	145.56	1	
Ce	140	115	He	0.064	ppb	31.8	1966.67	1	
Tl	205	159	He	0.063	ppb	9.1	1927.33	1	
Pb	208	159	He	0.033	ppb	11.7	2817.14	1	
Th	232	159	He	0.035	ppb	5.4	694.49	1	
U	238	159	He	0.069	ppb	8.5	2551.71	1	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	236683.05	0.7	222181.13	106.53	60	120	
Ge (IS)	72	He	191519.10	0.6	177648.1	107.81	60	120	
In-115 (IS)	115	He	1936866.42	0.5	1890884.26	102.43	60	120	
Tb-159 (IS)	159	He	6321465.58	0.2	6270485.31	100.81	60	120	

# Sample Report

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<b>Sample Name</b>	440-258909-b-44-a@20
<b>File Name</b>	111SMPL.d
<b>Data Path Name</b>	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
<b>Acq Time</b>	2020-01-14 20:56:43
<b>Sample Type</b>	Sample
<b>Total Dilution</b>	1.0000
<b>Comment</b>	CAM SOIL 440-590387 MP
<b>Location</b>	3310

**QC Analyte Table**

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	0.284	ppb	8.0	19.17	1000	
Al	27	45	He	9577.516	ppb	1.4	1355850.46	5000	>LDR
V	51	45	He	46.425	ppb	1.5	255435.03	5000	
Cr	52	45	He	26.038	ppb	0.9	182389.68	5000	
Mn	55	45	He	96.560	ppb	0.9	320802.90	4000	
Fe	56	45	He	55994.769	ppb	1.7	311421534.29	30000	>LDR
Co	59	45	He	5.170	ppb	2.2	65623.33	5000	
Ni	60	45	He	8.356	ppb	1.9	29358.41	5000	
Cu	65	45	He	1243.286	ppb	1.3	6179418.78	5000	
Zn	66	72	He	14.732	ppb	0.9	18449.06	5000	
As	75	72	He	44.241	ppb	2.2	34097.18	5000	
Se	78	72	He	12.823	ppb	4.2	636.35	5000	
Rb	85	115	He	10.348	ppb	1.3	30665.98	100	
Sr	88	115	He	177.919	ppb	0.7	680504.73	5000	
Mo	95	115	He	30.688	ppb	0.9	131107.69	3000	
Ag	107	115	He	0.121	ppb	6.8	1836.79	100	
Cd	111	115	He	0.078	ppb	2.0	155.00	5000	
Sn	118	115	He	158.440	ppb	1.0	635470.34	2000	
Sb	121	115	He	1.553	ppb	1.1	6921.68	5000	
Cs	133	115	He	1.039	ppb	1.5	10078.01	100	
Ba	137	115	He	62.541	ppb	1.5	107392.09	5000	
Ce	140	115	He	29.435	ppb	0.9	871780.42	2000	
Tl	205	159	He	0.086	ppb	2.1	2579.15	5000	
Pb	208	159	He	14.252	ppb	0.8	518831.05	5000	
Th	232	159	He	170.674	ppb	0.9	2647633.50	100	>LDR
U	238	159	He	7.897	ppb	0.7	286561.66	5000	

**QC ISTD Table**

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	251703.96	0.5	222181.13	113.29	60	120	
Ge (IS)	72	He	190389.59	1.4	177648.1	107.17	60	120	
In-115 (IS)	115	He	1912528.93	0.6	1890884.26	101.14	60	120	
Tb-159 (IS)	159	He	6250934.34	0.6	6270485.31	99.69	60	120	

# Sample Report

Sample Name	440-258909-b-45-a@20
File Name	112SMPL.d
Data Path Name	D:\Agilent\CPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 20:58:48
Sample Type	Sample
Total Dilution	1.0000
Comment	CAM SOIL 440-590387 MP
Location	3311

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	0.290	ppb	6.3	18.67	1000	
Al	27	45	He	15092.409	ppb	0.7	2039025.50	5000	>LDR
V	51	45	He	41.071	ppb	0.6	215688.56	5000	
Cr	52	45	He	20.733	ppb	1.4	138787.77	5000	
Mn	55	45	He	85.793	ppb	0.5	272039.22	4000	
Fe	56	45	He	32530.601	ppb	0.9	172672433.14	30000	>LDR
Co	59	45	He	4.295	ppb	0.8	52037.72	5000	
Ni	60	45	He	8.721	ppb	0.6	29237.03	5000	
Cu	65	45	He	1335.977	ppb	0.8	6337097.25	5000	
Zn	66	72	He	16.268	ppb	0.6	20367.08	5000	
As	75	72	He	16.070	ppb	1.6	12408.12	5000	
Se	78	72	He	6.179	ppb	6.2	332.00	5000	
Rb	85	115	He	11.789	ppb	1.0	34909.69	100	
Sr	88	115	He	305.060	ppb	1.0	1165913.11	5000	
Mo	95	115	He	9.154	ppb	0.7	39104.91	3000	
Ag	107	115	He	0.218	ppb	3.5	3267.05	100	
Cd	111	115	He	0.033	ppb	3.2	70.67	5000	
Sn	118	115	He	18.495	ppb	1.2	74309.53	2000	
Sb	121	115	He	4.201	ppb	2.5	18451.77	5000	
Cs	133	115	He	1.669	ppb	2.5	16163.55	100	
Ba	137	115	He	158.815	ppb	0.2	272477.49	5000	
Ce	140	115	He	25.463	ppb	1.0	753610.91	2000	
Tl	205	159	He	0.118	ppb	3.6	3532.70	5000	
Pb	208	159	He	6.403	ppb	0.6	234764.58	5000	
Th	232	159	He	45.618	ppb	1.0	710165.85	100	
U	238	159	He	7.098	ppb	2.4	258394.74	5000	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	240209.79	0.6	222181.13	108.11	60	120	
Ge (IS)	72	He	190559.83	0.4	177648.1	107.27	60	120	
In-115 (IS)	115	He	1911193.68	0.5	1890884.26	101.07	60	120	
Tb-159 (IS)	159	He	6272096.56	0.5	6270485.31	100.03	60	120	

# Sample Report

Sample Name	440-258909-b-46-a@20
File Name	113SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
Acq Time	2020-01-14 21:00:54
Sample Type	Sample
Total Dilution	1.0000
Comment	CAM SOIL 440-590387 MP
Location	3312

## QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	0.626	ppb	14.0	39.67	1000	
Al	27	45	He	10639.527	ppb	0.9	1445661.46	5000	>LDR
V	51	45	He	42.791	ppb	0.3	225995.46	5000	
Cr	52	45	He	24.341	ppb	1.0	163706.14	5000	
Mn	55	45	He	61.766	ppb	0.9	197016.20	4000	
Fe	56	45	He	32467.106	ppb	0.8	173318775.34	30000	>LDR
Co	59	45	He	3.304	ppb	0.6	40264.34	5000	
Ni	60	45	He	8.008	ppb	0.9	27008.48	5000	
Cu	65	45	He	1087.279	ppb	1.0	5186872.43	5000	
Zn	66	72	He	15.763	ppb	3.2	19646.15	5000	
As	75	72	He	29.604	ppb	1.1	22733.15	5000	
Se	78	72	He	6.384	ppb	8.1	339.67	5000	
Rb	85	115	He	9.227	ppb	0.8	27217.04	100	
Sr	88	115	He	201.449	ppb	1.1	766906.67	5000	
Mo	95	115	He	6.393	ppb	0.9	27210.56	3000	
Ag	107	115	He	0.150	ppb	4.1	2257.96	100	
Cd	111	115	He	0.022	ppb	14.7	49.00	5000	
Sn	118	115	He	14.851	ppb	0.9	59472.95	2000	
Sb	121	115	He	6.595	ppb	0.9	28766.20	5000	
Cs	133	115	He	1.134	ppb	1.6	10943.08	100	
Ba	137	115	He	117.848	ppb	0.4	201396.33	5000	
Ce	140	115	He	21.354	ppb	0.3	629521.74	2000	
Tl	205	159	He	0.092	ppb	4.6	2800.30	5000	
Pb	208	159	He	4.474	ppb	0.5	165392.33	5000	
Th	232	159	He	51.396	ppb	1.1	804307.87	100	
U	238	159	He	7.897	ppb	1.5	289035.36	5000	

## QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	241574.11	0.3	222181.13	108.73	60	120	
Ge (IS)	72	He	189625.68	0.7	177648.1	106.74	60	120	
In-115 (IS)	115	He	1903597.45	0.1	1890884.26	100.67	60	120	
Tb-159 (IS)	159	He	6305142.66	0.6	6270485.31	100.55	60	120	

# Sample Report

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<b>Sample Name</b>	440-258909-b-48-a@20
<b>File Name</b>	114SMPL.d
<b>Data Path Name</b>	D:\Agilent\ICPMH\1\DATA\200114-2LL.b
<b>Acq Time</b>	2020-01-14 21:03:00
<b>Sample Type</b>	Sample
<b>Total Dilution</b>	1.0000
<b>Comment</b>	CAM SOIL 440-590387 MP
<b>Location</b>	3401

**QC Analyte Table**

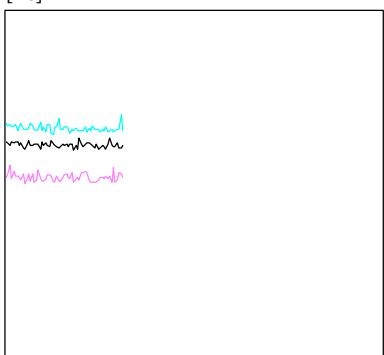
Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Be	9	45	He	0.543	ppb	10.5	34.00	1000	
Al	27	45	He	13792.498	ppb	0.8	1848378.71	5000	>LDR
V	51	45	He	50.087	ppb	0.8	260870.79	5000	
Cr	52	45	He	17.568	ppb	1.1	116786.60	5000	
Mn	55	45	He	101.372	ppb	0.9	318812.04	4000	
Fe	56	45	He	21854.117	ppb	0.8	115067968.76	30000	
Co	59	45	He	8.339	ppb	1.7	100182.62	5000	
Ni	60	45	He	13.790	ppb	1.0	45810.02	5000	
Cu	65	45	He	1541.720	ppb	1.2	7253794.71	5000	
Zn	66	72	He	22.580	ppb	0.6	28119.49	5000	
As	75	72	He	2.787	ppb	4.7	2159.16	5000	
Se	78	72	He	3.196	ppb	3.7	194.67	5000	
Rb	85	115	He	14.189	ppb	1.4	41947.73	100	
Sr	88	115	He	70.673	ppb	1.4	269763.65	5000	
Mo	95	115	He	1.731	ppb	1.5	7409.66	3000	
Ag	107	115	He	0.161	ppb	4.2	2429.10	100	
Cd	111	115	He	0.031	ppb	11.0	66.00	5000	
Sn	118	115	He	1.681	ppb	3.0	6930.60	2000	
Sb	121	115	He	0.303	ppb	8.3	1467.86	5000	
Cs	133	115	He	1.171	ppb	1.9	11333.39	100	
Ba	137	115	He	82.106	ppb	0.4	140678.25	5000	
Ce	140	115	He	20.405	ppb	0.5	603057.41	2000	
Tl	205	159	He	0.100	ppb	2.0	3023.68	5000	
Pb	208	159	He	2.776	ppb	0.8	103534.54	5000	
Th	232	159	He	25.083	ppb	0.6	393751.56	100	
U	238	159	He	7.728	ppb	1.3	283645.63	5000	

**QC ISTD Table**

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc-45 (IS)	45	He	238276.10	0.8	222181.13	107.24	60	120	
Ge (IS)	72	He	190207.72	0.0	177648.1	107.07	60	120	
In-115 (IS)	115	He	1908409.45	0.7	1890884.26	100.93	60	120	
Tb-159 (IS)	159	He	6323270.16	0.3	6270485.31	100.84	60	120	

## Current Signal

[He]



Mass	Range	Count	Avg. Count	RSD [%]
59	20000	13119	13283.5	1.50
89	20000	10485	10460.9	2.20
205	50000	30770	30809.5	1.19
70/140	2	1.009 %	0.925 %	6.40
156/140	1	0.281 %	0.229 %	12.04
51	20	3	4.4	52.83
56	2000	423	452.3	31.80
75	20	1	0.4	166.21
78	20	10	6.6	40.50

Integration Time [sec] 0.10

### ## Plasma Parameters ##

RF Power	1500	W	Nebulizer Pump	0.10	rps
RF Matching	1.80	V	S/C Temp	2	°C
Smpl Depth	8.0	mm	Gas Switch	Dilution Gas	
Carrier Gas	0.80	L/min	Makeup/Dilution Gas	0.25	L/min
Option Gas	0.0	%			

### ## Lenses Parameters ##

Extract 1	1.3	V	Cell Entrance	-40	V
Extract 2	-250.0	V	Cell Exit	-70	V
Omega Bias	-110	V	Deflect	5.4	V
Omega Lens	9.8	V	Plate Bias	-60	V

### ## Cell Parameters ##

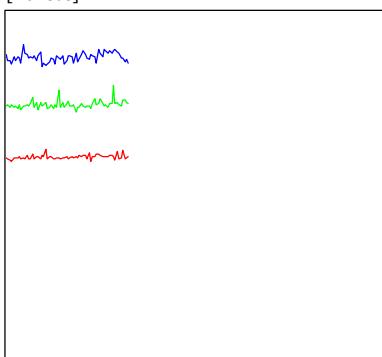
Use Gas	Yes		OctP RF	200	V
He Flow	4.5	mL/min	Energy Discrimination	5.0	V
OctP Bias	-18.0	V			

### Meters

IF/BK Press	1.68E+2	Pa	Carrier Gas(BP)	2.92E+2	kPa	Reflected Power	12	W
Analyzer Press	1.21E-4	Pa	Ar Gas Tank Press	6.49E+2	kPa			

## Current Signal

[No Gas]



Mass	Range	Count	Avg. Count	RSD [%]
7	20000	17011	17362.3	1.55
65	50	32	32.2	20.24
89	200000	116411	116338.7	1.10
205	100000	73395	73241.7	1.61
156/140	1	0.450 %	0.473 %	5.00
70/140	1	0.720 %	0.726 %	4.15
9	20	1	2.4	74.08
10	100	52	49.3	17.13
220	20	1	1.5	83.62

Integration Time [sec] 0.10

### ## Plasma Parameters ##

RF Power	1500	W	Nebulizer Pump	0.10	rps
RF Matching	1.80	V	S/C Temp	2	°C
Smpl Depth	8.0	mm	Gas Switch	Dilution Gas	
Carrier Gas	0.80	L/min	Makeup/Dilution Gas	0.25	L/min
Option Gas	0.0	%			

### ## Lenses Parameters ##

Extract 1	1.3	V	Cell Entrance	-40	V
Extract 2	-250.0	V	Cell Exit	-60	V
Omega Bias	-110	V	Deflect	17.2	V
Omega Lens	9.8	V	Plate Bias	-50	V

### ## Cell Parameters ##

Use Gas	No		OctP RF	200	V
He Flow	0.0	mL/min	Energy Discrimination	5.0	V
OctP Bias	-8.0	V			

### Meters

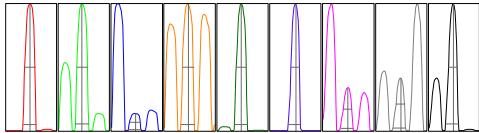
IF/BK Press	1.66E+2	Pa	Carrier Gas(BP)	2.91E+2	kPa	Reflected Power	12	W
Analyzer Press	6.53E-5	Pa	Ar Gas Tank Press	6.49E+2	kPa			

## US EPA Tune Check Sample Report

**Batch Folder** D:\Agilent\ICPMH\1\DATA\6\_6020\_template\_170802\_rev1C\_3.b  
**Report Comment**  
**Instrument Name** G8403A JP16211410

[No Gas]	Mass	Count	RSD%	RSD%	RSD%
	(Mean)	(Actual)	(Required)	(Flag)	
9	3231	0.71	5.00		
24	18780	0.19	5.00		
25	2574	0.87	5.00		
26	3070	0.66	5.00		
59	38399	0.29	5.00		
115	64623	0.25	5.00		
206	13275	0.22	5.00		
207	11624	0.71	5.00		
208	28316	0.51	5.00		
Mass	Replicate 1	Replicate 2	Replicate 3	Replicate 4	Replicate 5
	Count	Count	Count	Count	Count
9	3260	3208	3245	3208	3236
24	18815	18743	18753	18766	18823
25	2588	2571	2563	2604	2546
26	3096	3076	3040	3074	3066
59	38367	38300	38381	38593	38352
115	64879	64599	64661	64507	64469
206	13291	13297	13275	13225	13287
207	11737	11677	11556	11542	11607
208	28482	28457	28170	28203	28267

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width-X% (Flag)
9	5456	8.95	8.9 - 9.1		0.778	0.900	
24	30879	23.90	23.9 - 24.1		0.784	0.900	
25	4212	24.95	24.9 - 25.1		0.770	0.900	
26	5023	25.95	25.9 - 26.1		0.811	0.900	
59	67116	58.85	58.8 - 59.1		0.775	0.900	
115	122983	115.05	114.9 - 115.1		0.723	0.900	
206	25356	206.00	205.9 - 206.1		0.775	0.900	
207	22332	207.00	206.9 - 207.1		0.750	0.900	
208	53637	208.00	207.9 - 208.1		0.804	0.900	

X% = 5 Integration Time [sec] = 0.1 Acquisition Time [sec] = 212.5 Y Axis = Linear

### Tune Parameters

#### ## Plasma Parameters ##

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
RF Power	1500	W	Carrier Gas	0.80	L/min	S/C Temp	2	°C
RF Matching	1.80	V	Option Gas	0.0	%	Gas Switch	Dilution Gas	
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Makeup/Dilution Gas	0.25	L/min

#### ## Lenses Parameters ##

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	1.3	V	Omega Lens	9.8	V	Deflect	17.2	V
Extract 2	-250.0	V	Cell Entrance	-40	V	Plate Bias	-50	V
Omega Bias	-110	V	Cell Exit	-60	V			

#### ## Cell Parameters ##

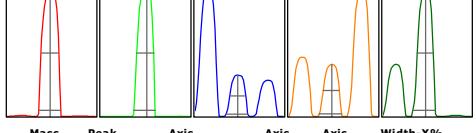
ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Use Gas	No		OctP Bias	-8.0	V	Energy Discrimination	5.0	V
He Flow	0.0	mL/min	OctP RF	200	V			

### [He]

Mass	Count	RSD%	RSD%
	(Mean)	(Actual)	(Required)
59	7488	0.73	5.00
115	7593	0.17	5.00
206	5052	0.94	5.00
207	4462	1.22	5.00
208	10824	0.74	5.00

Mass	Replicate 1	Replicate 2	Replicate 3	Replicate 4	Replicate 5
	Count	Count	Count	Count	Count
59	7575	7509	7548	7456	7443
115	7609	7599	7594	7575	7588
206	5101	5080	5076	5008	4994
207	4495	4541	4419	4444	4414
208	10892	10906	10838	10764	10719

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width-X% (Flag)
59	13247	59.000	58.9 - 59.1		0.737	0.900	
115	14454	115.050	114.9 - 115.1		0.688	0.900	
206	10034	206.000	205.9 - 206.1		0.724	0.900	
207	8818	207.000	206.9 - 207.1		0.730	0.900	
208	21456	208.000	207.9 - 208.1		0.744	0.900	

X% = 5 Integration Time [sec] = 0.1 Acquisition Time [sec] = 123.4 Y Axis = Linear

### Tune Parameters

#### ## Plasma Parameters ##

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
RF Power	1500	W	Carrier Gas	0.80	L/min	S/C Temp	2	°C
RF Matching	1.80	V	Option Gas	0.0	%	Gas Switch	Dilution Gas	
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Makeup/Dilution Gas	0.25	L/min

#### ## Lenses Parameters ##

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	1.3	V	Omega Lens	9.8	V	Deflect	5.4	V
Extract 2	-250.0	V	Cell Entrance	-40	V	Plate Bias	-60	V
Omega Bias	-110	V	Cell Exit	-70	V			

#### ## Cell Parameters ##

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Use Gas	Yes		OctP Bias	-18.0	V	Energy Discrimination	5.0	V
He Flow	4.5	mL/min	OctP RF	200	V			

PAFactor.txt  
P/A Factor Tuning Report

===== Current Sample =====

Sample Name: RINSE  
Data File: 001SMPL.d  
Acquired: 2020-01-14 09:27:13

===== Detector Parameters and P/A Factors =====

Discriminator: 4.8 mV  
AnalogHV: 2244 V  
PulseHV: 1279 V

Acquired: 2020-01-14 08:23:13

Mass[u]	Element	P/A Factor
9	Be	0.105452
24	Mg	0.115881
27	Al	0.121694
45	Sc	0.128427
51	V	0.132281
52	Cr	0.136736
55	Mn	0.139108
59	Co	0.148131
60	Ni	0.149435
65	Cu	0.155600
66	Zn	0.155439
72	Ge	0.149640
75	As	0.150802
95	Mo	0.145861
96	Mo	0.148874
98	Mo	0.148660
100	Ru	0.151184
101	Ru	0.153140
102	Ru	0.153528
104	Ru	0.156187
115	In	0.163790
118	Sn	0.164111
121	Sb	0.162417
138	Ba	0.163631
193	Ir	0.178065
205	Tl	0.183135
208	Pb	0.181591
209	Bi	0.182727
232	Th	0.180057
238	U	0.179407

Created: 2020-01-14 09:30:15

## 1-20-20-soil

Method: SOIL      Operator: Admin

Date of Analysis: 20 Jan 2020 10:56:09

Seq ID	Type	Sample ID	Extended ID	Date	Conc	Units	Std Conc	u Abs./Method	Chapter
20954	S	IC 440-591352/6-A - 1		20 Jan 2020 12:12:26	-	ppb	0.0000	1472SOIL	1-20-20-soil
20955	S	IC 440-591352/6-A - 2		20 Jan 2020 12:12:26	-	ppb	0.0000	1537SOIL	1-20-20-soil
20956	S	IC 440-591352/7-A - 1		20 Jan 2020 12:14:37	-	ppb	0.2000	3140SOIL	1-20-20-soil
20957	S	IC 440-591352/7-A - 2		20 Jan 2020 12:14:37	-	ppb	0.2000	3244SOIL	1-20-20-soil
20958	S	IC 440-591352/8-A - 1		20 Jan 2020 12:16:49	-	ppb	0.5000	5534SOIL	1-20-20-soil
20959	S	IC 440-591352/8-A - 2		20 Jan 2020 12:16:49	-	ppb	0.5000	5758SOIL	1-20-20-soil
20960	S	IC 440-591352/9-A - 1		20 Jan 2020 12:19:03	-	ppb	1.0000	9615SOIL	1-20-20-soil
20961	S	IC 440-591352/9-A - 2		20 Jan 2020 12:19:03	-	ppb	1.0000	10005SOIL	1-20-20-soil
20962	S	IC 440-591352/10-A - 1		20 Jan 2020 12:21:16	-	ppb	5.0000	46926SOIL	1-20-20-soil
20963	S	IC 440-591352/10-A - 2		20 Jan 2020 12:21:16	-	ppb	5.0000	49016SOIL	1-20-20-soil
20964	S	IC 440-591352/11-A - 1		20 Jan 2020 12:23:40	-	ppb	10.0000	95199SOIL	1-20-20-soil
20965	S	IC 440-591352/11-A - 2		20 Jan 2020 12:23:40	-	ppb	10.0000	99296SOIL	1-20-20-soil
20966	C	ICV 440-591352/1-A - 1		20 Jan 2020 12:26:16	93.1% 3.7240	ppb	-	36585SOIL	1-20-20-soil
20967	C	ICV 440-591352/1-A - 2		20 Jan 2020 12:26:16	97.1% 3.8846	ppb	-	38125SOIL	1-20-20-soil
20968	C	ICB 440-591352/2-A - 1		20 Jan 2020 12:29:21	-0.0397	ppb	-	483SOIL	1-20-20-soil
20969	C	ICB 440-591352/2-A - 2		20 Jan 2020 12:29:21	-0.0348	ppb	-	530SOIL	1-20-20-soil
20970	C	CRA 440-591352/5-A - 1		20 Jan 2020 12:32:12	107.2% 0.2143	ppb	-	2920SOIL	1-20-20-soil
20971	C	CRA 440-591352/5-A - 2		20 Jan 2020 12:32:12	114.6% 0.2291	ppb	-	3062SOIL	1-20-20-soil
20972	C	CCV 440-591352/3-A - 1		20 Jan 2020 12:34:25	96.2% 3.8496	ppb	-	37789SOIL	1-20-20-soil
20973	C	CCV 440-591352/3-A - 2		20 Jan 2020 12:34:25	100.1% 4.0059	ppb	-	39289SOIL	1-20-20-soil
20974	C	CCB 440-591352/4-A - 1		20 Jan 2020 12:36:36	-0.0324	ppb	-	553SOIL	1-20-20-soil
20975	C	CCB 440-591352/4-A - 2		20 Jan 2020 12:36:36	-0.0314	ppb	-	563SOIL	1-20-20-soil
20976	U	MB 440-590447/1-A - 1		20 Jan 2020 12:39:22	-0.0919	ppb	-	-17SOIL	1-20-20-soil
20977	U	MB 440-590447/1-A - 2		20 Jan 2020 12:39:22	-0.0943	ppb	-	-40SOIL	1-20-20-soil
20978	U	LCS 440-590447/2-A - 1		20 Jan 2020 12:41:34	3.6497	ppb	-	35872SOIL	1-20-20-soil
20979	U	LCS 440-590447/2-A - 2		20 Jan 2020 12:41:34	3.8151	ppb	-	37459SOIL	1-20-20-soil
20980	U	440-258875/B-1-D - 1		20 Jan 2020 12:43:42	0.5900	ppb	-	6523SOIL	1-20-20-soil
20981	U	440-258875/B-1-D - 2		20 Jan 2020 12:43:42	0.6113	ppb	-	6728SOIL	1-20-20-soil
20982	U	440-258875/B-1-E MS - 1		20 Jan 2020 12:46:22	3.7161	ppb	-	36509SOIL	1-20-20-soil
20983	U	440-258875/B-1-E MS - 2		20 Jan 2020 12:46:22	3.8798	ppb	-	38079SOIL	1-20-20-soil
20984	U	440-258875/B-1-F MSD - 1		20 Jan 2020 12:48:55	3.8112	ppb	-	37421SOIL	1-20-20-soil
20985	U	440-258875/B-1-F MSD - 2		20 Jan 2020 12:48:55	3.9785	ppb	-	39026SOIL	1-20-20-soil
20986	U	440-258875/B-2-B - 1		20 Jan 2020 12:51:54	0.1124	ppb	-	1942SOIL	1-20-20-soil
20987	U	440-258875/B-2-B - 2		20 Jan 2020 12:51:54	0.1257	ppb	-	2070SOIL	1-20-20-soil
20988	U	440-258875/B-3-B - 1		20 Jan 2020 12:54:51	0.0326	ppb	-	1177SOIL	1-20-20-soil
20989	U	440-258875/B-3-B - 2		20 Jan 2020 12:54:51	0.0450	ppb	-	1296SOIL	1-20-20-soil
20990	U	440-258875/B-4-B - 1		20 Jan 2020 12:57:07	0.0330	ppb	-	1181SOIL	1-20-20-soil
20991	U	440-258875/B-4-B - 2		20 Jan 2020 12:57:07	0.0436	ppb	-	1282SOIL	1-20-20-soil
20992	U	440-258875/B-5-B - 1		20 Jan 2020 12:59:21	0.0069	ppb	-	930SOIL	1-20-20-soil
20993	U	440-258875/B-5-B - 2		20 Jan 2020 12:59:21	0.0169	ppb	-	1026SOIL	1-20-20-soil
20994	U	440-258875/B-6-B - 1		20 Jan 2020 13:01:36	0.0424	ppb	-	1271SOIL	1-20-20-soil
20995	U	440-258875/B-6-B - 2		20 Jan 2020 13:01:36	0.0502	ppb	-	1346SOIL	1-20-20-soil
20996	C	CCV 440-591352/3-A - 1		20 Jan 2020 13:03:48	93.3% 3.7328	ppb	-	36669SOIL	1-20-20-soil
20997	C	CCV 440-591352/3-A - 2		20 Jan 2020 13:03:48	97.5% 3.9016	ppb	-	38288SOIL	1-20-20-soil
20998	C	CCB 440-591352/4-A - 1		20 Jan 2020 13:05:59	-0.0148	ppb	-	724SOIL	1-20-20-soil
20999	C	CCB 440-591352/4-A - 2		20 Jan 2020 13:05:59	-0.0092	ppb	-	776SOIL	1-20-20-soil
21000	U	440-258875/B-7-B - 1		20 Jan 2020 13:08:48	0.2366	ppb	-	3134SOIL	1-20-20-soil
21001	U	440-258875/B-7-B - 2		20 Jan 2020 13:08:48	0.2558	ppb	-	3318SOIL	1-20-20-soil
21002	U	440-258875/B-8-B - 1		20 Jan 2020 13:11:00	0.0125	ppb	-	984SOIL	1-20-20-soil
21003	U	440-258875/B-8-B - 2		20 Jan 2020 13:11:00	0.0238	ppb	-	1092SOIL	1-20-20-soil
21004	U	440-258875/B-9-B - 1		20 Jan 2020 13:13:13	0.0860	ppb	-	1689SOIL	1-20-20-soil
21005	U	440-258875/B-9-B - 2		20 Jan 2020 13:13:13	0.0981	ppb	-	1805SOIL	1-20-20-soil
21006	U	440-258875/B-11-B - 1		20 Jan 2020 13:15:27	-0.0063	ppb	-	804SOIL	1-20-20-soil
21007	U	440-258875/B-11-B - 2		20 Jan 2020 13:15:27	-0.0074	ppb	-	793SOIL	1-20-20-soil
21008	U	440-258875/B-12-B - 1		20 Jan 2020 13:17:39	0.0232	ppb	-	1087SOIL	1-20-20-soil
21009	U	440-258875/B-12-B - 2		20 Jan 2020 13:17:39	0.0304	ppb	-	1156SOIL	1-20-20-soil
21010	U	440-258875/B-13-B - 1		20 Jan 2020 13:19:51	0.0409	ppb	-	1256SOIL	1-20-20-soil
21011	U	440-258875/B-13-B - 2		20 Jan 2020 13:19:51	0.0485	ppb	-	1329SOIL	1-20-20-soil
21012	U	440-258875/B-14-B - 1		20 Jan 2020 13:22:04	0.0037	ppb	-	900SOIL	1-20-20-soil
21013	U	440-258875/B-14-B - 2		20 Jan 2020 13:22:04	0.0082	ppb	-	943SOIL	1-20-20-soil
21014	U	440-258875/B-15-B - 1		20 Jan 2020 13:24:15	-0.0202	ppb	-	670SOIL	1-20-20-soil
21015	U	440-258875/B-15-B - 2		20 Jan 2020 13:24:15	-0.0141	ppb	-	729SOIL	1-20-20-soil
21016	U	440-258875/B-16-B - 1		20 Jan 2020 13:26:28	0.0028	ppb	-	891SOIL	1-20-20-soil
21017	U	440-258875/B-16-B - 2		20 Jan 2020 13:26:28	0.0102	ppb	-	962SOIL	1-20-20-soil
21018	U	440-258875/B-17-B - 1		20 Jan 2020 13:28:39	0.0026	ppb	-	889SOIL	1-20-20-soil
21019	U	440-258875/B-17-B - 2		20 Jan 2020 13:28:39	0.0072	ppb	-	933SOIL	1-20-20-soil
21020	C	CCV 440-591352/3-A - 1		20 Jan 2020 13:30:52	94.3% 3.7720	ppb	-	37045SOIL	1-20-20-soil
21021	C	CCV 440-591352/3-A - 2		20 Jan 2020 13:30:52	98.3% 3.9332	ppb	-	38591SOIL	1-20-20-soil
21022	C	CCB 440-591352/4-A - 1		20 Jan 2020 13:33:03	-0.0482	ppb	-	402SOIL	1-20-20-soil
21023	C	CCB 440-591352/4-A - 2		20 Jan 2020 13:33:03	-0.0405	ppb	-	476SOIL	1-20-20-soil
21024	U	440-258875/B-19-B - 1		20 Jan 2020 13:35:43	0.1280	ppb	-	2092SOIL	1-20-20-soil
21025	U	440-258875/B-19-B - 2		20 Jan 2020 13:35:43	0.1372	ppb	-	2180SOIL	1-20-20-soil
21026	U	440-258875/B-20-B - 1		20 Jan 2020 13:37:55	-0.0016	ppb	-	849SOIL	1-20-20-soil
21027	U	440-258875/B-20-B - 2		20 Jan 2020 13:37:55	0.0033	ppb	-	896SOIL	1-20-20-soil
21028	U	440-258906/B-1-B - 1		20 Jan 2020 13:40:10	2.3303	ppb	-	23242SOIL	1-20-20-soil
21029	U	440-258906/B-1-B - 2		20 Jan 2020 13:40:10	2.4455	ppb	-	24321SOIL	1-20-20-soil
21030	U	440-258906/B-2-B - 1		20 Jan 2020 13:42:23	1.6659	ppb	-	16843SOIL	1-20-20-soil
21031	U	440-258906/B-2-B - 2		20 Jan 2020 13:42:23	1.7418	ppb	-	17571SOIL	1-20-20-soil
21032	C	CRA 440-591352/5-A - 1		20 Jan 2020 13:45:26	(L)50.1% 0.1003	ppb	-	1826SOIL	1-20-20-soil
21033	C	CRA 440-591352/5-A - 2		20 Jan 2020 13:45:26	(L)56.3% 0.1126	ppb	-	1944SOIL	1-20-20-soil
21034	C	CRA 440-591352/5-A - 1		20 Jan 2020 13:47:59	114.0% 0.2280	ppb	-	3051SOIL	1-20-20-soil
21035	C	CRA 440-591352/5-A - 2		20 Jan 2020 13:47:59	120.7% 0.2413	ppb	-	3179SOIL	1-20-20-soil
21036	C	CCV 440-591352/3-A - 1		20 Jan 2020 13:50:18	95.9% 3.8341	ppb	-	37641SOIL	1-20-20-soil
21037	C	CCV 440-591352/3-A - 2		20 Jan 2020 13:50:18	100.1% 4.0032	ppb	-	39263SOIL	1-20-20-soil
21038	C	CCB 440-591352/4-A - 1		20 Jan 2020 13:52:29	-0.0189	ppb	-	683SOIL	1-20-20-soil
21039	C	CCB 440-591352/4-A - 2		20 Jan 2020 13:52:29	-0.0135	ppb	-	735SOIL	1-20-20-soil
21040	C	CCV 440-591352/3-A - 1		20 Jan 2020 13:59:28	99.0% 3.9590	ppb	-	38839SOIL	1-20-20-soil
21041	C	CCV 440-591352/3-A - 2		20 Jan 2020 13:59:28	103.1% 4.1251	ppb	-	40432SOIL	1-20-20-soil
21042	C	CCB 440-591352/4-A - 1		20 Jan 2020 14:01:36	-0.1885	ppb	-	-944SOIL	1-20-20-soil
21043	C	CCB 440-591352/4-A - 2		20 Jan 2020 14:01:36	-0.1836	ppb	-	-897SOIL	1-20-20-soil
21044	U	MB 440-590448/1-A - 1		20 Jan 2020 14:04:06	-0.0932	ppb	-	-30SOIL	1-20-20-soil
21045	U	MB 440-590448/1-A - 2		20 Jan 2020 14:04:06	-0.0918	ppb	-	-16SOIL	1-20-20-soil
21046	U	LCS 440-590448/2-A - 1		20 Jan 2020 14:06:					

## 1-20-20-soil

Method: SOIL      Operator: Admin

Date of Analysis: 20 Jan 2020 10:56:09

Seq ID	Type	Sample ID	Extended ID	Date	Conc	Units	Stnd Cond	u Abs./Method	Chapter
21064	C	CCV 440-591352/3-A - 1		20 Jan 2020 14:30:43	94.8% 3.7911	ppb		3722SOIL	1-20-20-soil
21065	C	CCV 440-591352/3-A - 2		20 Jan 2020 14:30:43	99.0% 3.9594	ppb		3884SOIL	1-20-20-soil
21066	C	CCB 440-591352/4-A - 1		20 Jan 2020 14:33:12	-0.1348	ppb		-429SOIL	1-20-20-soil
21067	C	CCB 440-591352/4-A - 2		20 Jan 2020 14:33:12	-0.1322	ppb		-404SOIL	1-20-20-soil
21068	U	440-258909-B-4-B - 1		20 Jan 2020 14:35:58	0.9306	ppb		9790SOIL	1-20-20-soil
21069	U	440-258909-B-4-B - 2		20 Jan 2020 14:35:58	0.9777	ppb		10242SOIL	1-20-20-soil
21070	U	440-258909-B-6-B - 1		20 Jan 2020 14:38:10	2.3102	ppb		23024SOIL	1-20-20-soil
21071	U	440-258909-B-6-B - 2		20 Jan 2020 14:38:10	2.4277	ppb		24151SOIL	1-20-20-soil
21072	U	440-258909-B-7-B - 1		20 Jan 2020 14:40:35	1.7523	ppb		17672SOIL	1-20-20-soil
21073	U	440-258909-B-7-B - 2		20 Jan 2020 14:40:35	1.8571	ppb		18677SOIL	1-20-20-soil
21074	U	440-258909-B-8-B - 1		20 Jan 2020 14:43:18	0.4988	ppb		5649SOIL	1-20-20-soil
21075	U	440-258909-B-8-B - 2		20 Jan 2020 14:43:18	0.5272	ppb		5921SOIL	1-20-20-soil
21076	U	440-258909-B-9-B - 1		20 Jan 2020 14:46:22	0.6296	ppb		6903SOIL	1-20-20-soil
21077	U	440-258909-B-9-B - 2		20 Jan 2020 14:46:22	0.6669	ppb		7261SOIL	1-20-20-soil
21078	U	440-258909-B-10-B - 1		20 Jan 2020 14:48:40	0.6093	ppb		6709SOIL	1-20-20-soil
21079	U	440-258909-B-10-B - 2		20 Jan 2020 14:48:40	0.6449	ppb		7050SOIL	1-20-20-soil
21080	U	440-258909-B-11-B - 1		20 Jan 2020 14:51:03	2.3577	ppb		23479SOIL	1-20-20-soil
21081	U	440-258909-B-11-B - 2		20 Jan 2020 14:51:03	2.4663	ppb		24521SOIL	1-20-20-soil
21082	U	440-258909-B-12-B - 1		20 Jan 2020 14:53:26	0.3909	ppb		4614SOIL	1-20-20-soil
21083	U	440-258909-B-12-B - 2		20 Jan 2020 14:53:26	0.4168	ppb		4881SOIL	1-20-20-soil
21084	U	440-258909-B-13-B - 1		20 Jan 2020 14:56:13	0.6190	ppb		6802SOIL	1-20-20-soil
21085	U	440-258909-B-13-B - 2		20 Jan 2020 14:56:13	0.6555	ppb		7152SOIL	1-20-20-soil
21086	U	440-258909-B-14-B - 1		20 Jan 2020 14:58:34	0.1871	ppb		2659SOIL	1-20-20-soil
21087	U	440-258909-B-14-B - 2		20 Jan 2020 14:58:34	0.2045	ppb		2826SOIL	1-20-20-soil
21088	C	CCV 440-591352/3-A - 1		20 Jan 2020 15:00:46	96.6% 3.8639	ppb		37927SOIL	1-20-20-soil
21089	C	CCV 440-591352/3-A - 2		20 Jan 2020 15:00:46	100.6% 4.0239	ppb		39461SOIL	1-20-20-soil
21090	C	CCB 440-591352/4-A - 1		20 Jan 2020 15:02:59	-0.1091	ppb		-182SOIL	1-20-20-soil
21091	C	CCB 440-591352/4-A - 2		20 Jan 2020 15:02:59	-0.1131	ppb		-221SOIL	1-20-20-soil
21092	U	440-258909-B-15-B - 1		20 Jan 2020 15:05:51	1.3214	ppb		13539SOIL	1-20-20-soil
21093	U	440-258909-B-15-B - 2		20 Jan 2020 15:05:51	1.3886	ppb		14184SOIL	1-20-20-soil
21094	U	440-258909-B-16-B - 1		20 Jan 2020 15:08:01	0.4183	ppb		4876SOIL	1-20-20-soil
21095	U	440-258909-B-16-B - 2		20 Jan 2020 15:08:01	0.4492	ppb		5173SOIL	1-20-20-soil
21096	U	440-258909-B-17-B - 1		20 Jan 2020 15:10:32	0.0878	ppb		1706SOIL	1-20-20-soil
21097	U	440-258909-B-17-B - 2		20 Jan 2020 15:10:32	0.1009	ppb		1832SOIL	1-20-20-soil
21098	U	440-258909-B-18-B - 1		20 Jan 2020 15:13:10	0.4146	ppb		4841SOIL	1-20-20-soil
21099	U	440-258909-B-18-B - 2		20 Jan 2020 15:13:10	0.4447	ppb		5130SOIL	1-20-20-soil
21100	C	CRA 440-591352/5-A - 1		20 Jan 2020 15:15:23	(L)57.8% 0.1156	ppb		1973SOIL	1-20-20-soil
21101	C	CRA 440-591352/5-A - 2		20 Jan 2020 15:15:23	(L)67.6% 0.1352	ppb		2161SOIL	1-20-20-soil
21102	C	CRA 440-591352/5-A - 1		20 Jan 2020 15:17:38	118.5% 0.2371	ppb		3138SOIL	1-20-20-soil
21103	C	CRA 440-591352/5-A - 2		20 Jan 2020 15:17:38	126.9% 0.2537	ppb		3298SOIL	1-20-20-soil
21104	C	CCV 440-591352/3-A - 1		20 Jan 2020 15:19:53	96.7% 3.8673	ppb		37959SOIL	1-20-20-soil
21105	C	CCV 440-591352/3-A - 2		20 Jan 2020 15:19:53	100.8% 4.0303	ppb		39523SOIL	1-20-20-soil
21106	C	CCB 440-591352/4-A - 1		20 Jan 2020 15:22:03	-0.1509	ppb		-583SOIL	1-20-20-soil
21107	C	CCB 440-591352/4-A - 2		20 Jan 2020 15:22:03	-0.1487	ppb		-562SOIL	1-20-20-soil
21108	C	CCV 440-591352/3-A - 1		20 Jan 2020 15:36:17	97.4% 3.8960	ppb		38235SOIL	1-20-20-soil
21109	C	CCV 440-591352/3-A - 2		20 Jan 2020 15:36:17	101.8% 4.0721	ppb		39924SOIL	1-20-20-soil
21110	C	CCB 440-591352/4-A - 1		20 Jan 2020 15:38:25	-0.0901	ppb		0SOIL	1-20-20-soil
21111	C	CCB 440-591352/4-A - 2		20 Jan 2020 15:38:25	-0.0853	ppb		46SOIL	1-20-20-soil
21112	U	MB 440-590453/1-A - 1		20 Jan 2020 15:41:06	-0.0977	ppb		-73SOIL	1-20-20-soil
21113	U	MB 440-590453/1-A - 2		20 Jan 2020 15:41:06	-0.0957	ppb		-54SOIL	1-20-20-soil
21114	U	LCS 440-590453/2-A - 1		20 Jan 2020 15:43:17	3.7256	ppb		36600SOIL	1-20-20-soil
21115	U	LCS 440-590453/2-A - 2		20 Jan 2020 15:43:17	3.8987	ppb		38260SOIL	1-20-20-soil
21116	U	440-258909-B-24-D - 1		20 Jan 2020 15:45:28	1.0855	ppb		11276SOIL	1-20-20-soil
21117	U	440-258909-B-24-D - 2		20 Jan 2020 15:45:28	1.1411	ppb		11810SOIL	1-20-20-soil
21118	U	440-258909-B-24-E MS - 1		20 Jan 2020 15:48:08	5.0050	ppb		48872SOIL	1-20-20-soil
21119	U	440-258909-B-24-E MS - 2		20 Jan 2020 15:48:08	5.2234	ppb		50967SOIL	1-20-20-soil
21120	U	440-258909-B-24-F MSD - 1		20 Jan 2020 15:51:01	10.9273	ppb		105679SOIL	1-20-20-soil
21121	U	440-258909-B-24-F MSD - 2		20 Jan 2020 15:51:01	11.4079	ppb		110289SOIL	1-20-20-soil
21122	U	440-258909-B-19-B - 1		20 Jan 2020 15:54:20	1.2852	ppb		13192SOIL	1-20-20-soil
21123	U	440-258909-B-19-B - 2		20 Jan 2020 15:54:20	1.3460	ppb		13775SOIL	1-20-20-soil
21124	U	440-258909-B-20-B - 1		20 Jan 2020 15:57:57	0.4473	ppb		5157SOIL	1-20-20-soil
21125	U	440-258909-B-20-B - 2		20 Jan 2020 15:57:57	0.4856	ppb		5522SOIL	1-20-20-soil
21126	U	440-258909-B-21-B - 1		20 Jan 2020 16:00:37	0.2592	ppb		3350SOIL	1-20-20-soil
21127	U	440-258909-B-21-B - 2		20 Jan 2020 16:00:37	0.2768	ppb		3517SOIL	1-20-20-soil
21128	U	440-258909-B-22-B - 1		20 Jan 2020 16:03:21	0.2769	ppb		3520SOIL	1-20-20-soil
21129	U	440-258909-B-22-B - 2		20 Jan 2020 16:03:21	0.3013	ppb		3754SOIL	1-20-20-soil
21130	U	440-258909-B-23-B - 1		20 Jan 2020 16:05:34	0.6591	ppb		7186SOIL	1-20-20-soil
21131	U	440-258909-B-23-B - 2		20 Jan 2020 16:05:34	0.7022	ppb		7600SOIL	1-20-20-soil
21132	C	CCV 440-591352/3-A - 1		20 Jan 2020 16:07:50	94.7% 3.7868	ppb		37187SOIL	1-20-20-soil
21133	C	CCV 440-591352/3-A - 2		20 Jan 2020 16:07:50	99.1% 3.9631	ppb		38878SOIL	1-20-20-soil
21134	C	CCB 440-591352/4-A - 1		20 Jan 2020 16:10:14	-0.1074	ppb		-166SOIL	1-20-20-soil
21135	C	CCB 440-591352/4-A - 2		20 Jan 2020 16:10:14	-0.1061	ppb		-154SOIL	1-20-20-soil
21136	U	440-258909-B-25-B - 1		20 Jan 2020 16:13:00	1.0538	ppb		10972SOIL	1-20-20-soil
21137	U	440-258909-B-25-B - 2		20 Jan 2020 16:13:00	1.1077	ppb		11489SOIL	1-20-20-soil
21138	U	440-258909-B-26-B - 1		20 Jan 2020 16:15:14	0.2644	ppb		3400SOIL	1-20-20-soil
21139	U	440-258909-B-26-B - 2		20 Jan 2020 16:15:14	0.2837	ppb		3585SOIL	1-20-20-soil
21140	U	440-258909-B-27-B - 1		20 Jan 2020 16:17:48	1.2301	ppb		12663SOIL	1-20-20-soil
21141	U	440-258909-B-27-B - 2		20 Jan 2020 16:17:48	1.2936	ppb		13272SOIL	1-20-20-soil
21142	U	440-258909-B-29-B - 1		20 Jan 2020 16:20:06	0.6885	ppb		7468SOIL	1-20-20-soil
21143	U	440-258909-B-29-B - 2		20 Jan 2020 16:20:06	0.7274	ppb		7841SOIL	1-20-20-soil
21144	U	440-258909-B-30-B - 1		20 Jan 2020 16:22:36	0.7362	ppb		7926SOIL	1-20-20-soil
21145	U	440-258909-B-30-B - 2		20 Jan 2020 16:22:36	0.7772	ppb		8319SOIL	1-20-20-soil
21146	U	440-258909-B-31-B - 1		20 Jan 2020 16:25:01	0.4904	ppb		5568SOIL	1-20-20-soil
21147	U	440-258909-B-31-B - 2		20 Jan 2020 16:25:01	0.5201	ppb		5853SOIL	1-20-20-soil
21148	U	440-258909-B-32-B - 1		20 Jan 2020 16:27:32	1.1067	ppb		11480SOIL	1-20-20-soil
21149	U	440-258909-B-32-B - 2		20 Jan 2020 16:27:32	1.1660	ppb		12048SOIL	1-20-20-soil
21150	U	440-258909-B-33-B - 1		20 Jan 2020 16:29:54	0.9693	ppb		10162SOIL	1-20-20-soil
21151	U	440-258909-B-33-B - 2		20 Jan 2020 16:29:54	1.0220	ppb		10667SOIL	1-20-20-soil
21152	U	440-258909-B-34-B - 1		20 Jan 2020 16:32:28	5.3817	ppb		52485SOIL	1-20-20-soil
21153	U	440-258909-B-34-B - 2		20 Jan 2020 16:32:28	5.6449	ppb		55010SOIL	1-20-20-soil
21154	U	440-258909-B-35-B - 1		20 Jan 2020 16:34:48	0.9798	ppb		10262SOIL	1-20-20-soil
21155	U	440-258909-B-35-B - 2		20 Jan 2020 16:34:48	1.0343	ppb		10785SOIL	1-20-20-soil
21156	C	CCV 440-591352/3-A - 1		20 Jan 2020 16:37:54	96.6% 3.8655	ppb		37942SOIL	1-20-20-soil

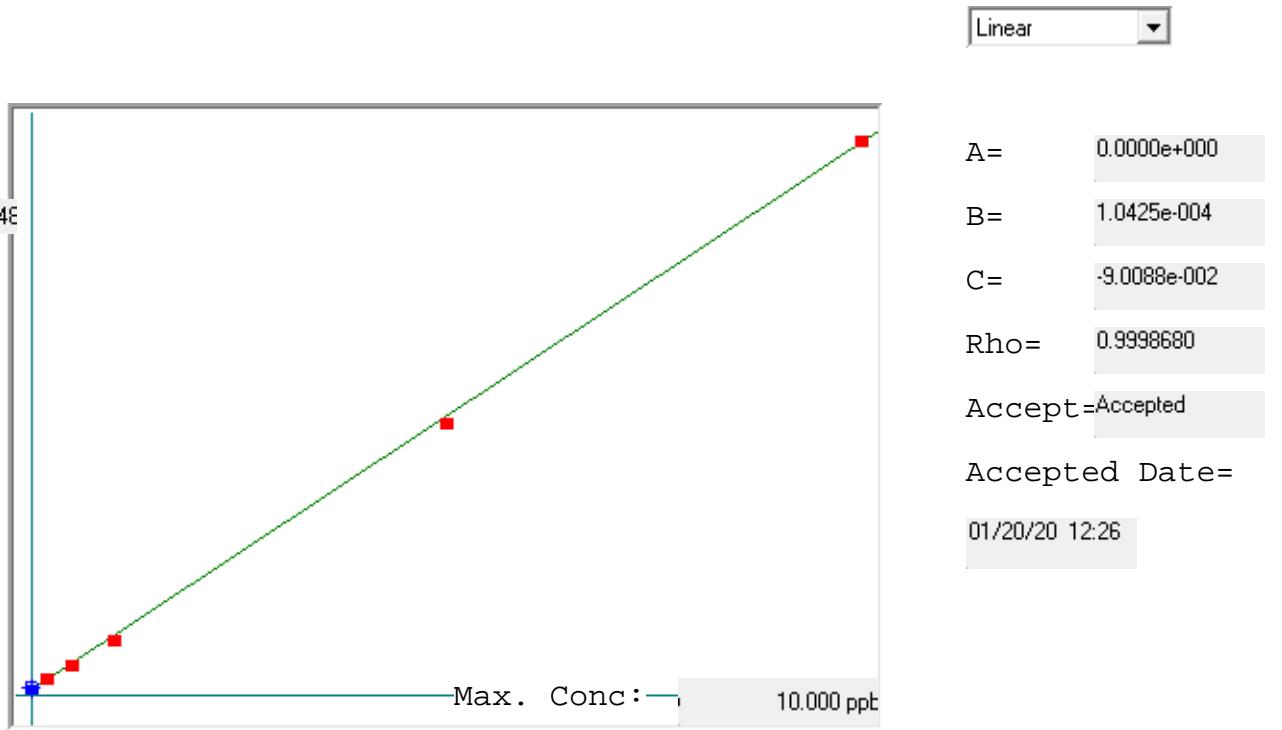
## 1-20-20-soil

Method: SOIL Operator: Admin

Date of Analysis: 20 Jan 2020 10:56:09

Seq ID	Type	Sample ID	Extended ID	Date	Conc	Units	Stnd Cond	$\mu$ Abs./Method	Chapter
21174	C	CCV 440-591352/3-A - 1		20 Jan 2020 17:01:47	96.9%	3.8746	ppb	38029SOIL	1-20-20-soil
21175	C	CCV 440-591352/3-A - 2		20 Jan 2020 17:01:47	101.3%	4.0515	ppb	39726SOIL	1-20-20-soil
21176	C	CCB 440-591352/4-A - 1		20 Jan 2020 17:03:55	-0.1465	ppb		-541SOIL	1-20-20-soil
21177	C	CCB 440-591352/4-A - 2		20 Jan 2020 17:03:55	-0.1509	ppb		-583SOIL	1-20-20-soil
21178	U	MB 440-590454/1-A - 1		20 Jan 2020 17:06:40	-0.0926	ppb		-24SOIL	1-20-20-soil
21179	U	MB 440-590454/1-A - 2		20 Jan 2020 17:06:40	-0.0915	ppb		-14SOIL	1-20-20-soil
21180	U	LCS 440-590454/2-A - 1		20 Jan 2020 17:08:50	3.5971	ppb		35367SOIL	1-20-20-soil
21181	U	LCS 440-590454/2-A - 2		20 Jan 2020 17:08:50	3.7608	ppb		36938SOIL	1-20-20-soil
21182	U	440-258909-B-43-D - 1		20 Jan 2020 17:11:00	0.6131	ppb		6745SOIL	1-20-20-soil
21183	U	440-258909-B-43-D - 2		20 Jan 2020 17:11:00	0.6474	ppb		7074SOIL	1-20-20-soil
21184	U	440-258909-B-43-E MS - 1		20 Jan 2020 17:13:36	3.8975	ppb		38249SOIL	1-20-20-soil
21185	U	440-258909-B-43-E MS - 2		20 Jan 2020 17:13:36	4.0874	ppb		40070SOIL	1-20-20-soil
21186	U	440-258909-B-43-F MSD - 1		20 Jan 2020 17:15:59	4.1213	ppb		40396SOIL	1-20-20-soil
21187	U	440-258909-B-43-F MSD - 2		20 Jan 2020 17:15:59	4.3200	ppb		42302SOIL	1-20-20-soil
21188	U	440-258909-B-41-B - 1		20 Jan 2020 17:19:05	0.3671	ppb		4385SOIL	1-20-20-soil
21189	U	440-258909-B-41-B - 2		20 Jan 2020 17:19:05	0.3920	ppb		4624SOIL	1-20-20-soil
21190	U	440-258909-B-42-B - 1		20 Jan 2020 17:22:05	0.4889	ppb		5554SOIL	1-20-20-soil
21191	U	440-258909-B-42-B - 2		20 Jan 2020 17:22:05	0.5216	ppb		5867SOIL	1-20-20-soil
21192	U	440-258909-B-44-B - 1		20 Jan 2020 17:24:26	2.1440	ppb		21429SOIL	1-20-20-soil
21193	U	440-258909-B-44-B - 2		20 Jan 2020 17:24:26	2.2664	ppb		22603SOIL	1-20-20-soil
21194	U	440-258909-B-45-B - 1		20 Jan 2020 17:26:56	2.7617	ppb		27354SOIL	1-20-20-soil
21195	U	440-258909-B-45-B - 2		20 Jan 2020 17:26:56	2.9039	ppb		28718SOIL	1-20-20-soil
21196	U	440-258909-B-46-B - 1		20 Jan 2020 17:29:56	2.4629	ppb		24488SOIL	1-20-20-soil
21197	U	440-258909-B-46-B - 2		20 Jan 2020 17:29:56	2.5871	ppb		25680SOIL	1-20-20-soil
21198	C	CCV 440-591352/3-A - 1		20 Jan 2020 17:32:46	94.9%	3.7945	ppb	37261SOIL	1-20-20-soil
21199	C	CCV 440-591352/3-A - 2		20 Jan 2020 17:32:46	99.4%	3.9751	ppb	38993SOIL	1-20-20-soil
21200	C	CCB 440-591352/4-A - 1		20 Jan 2020 17:35:28	-0.1933	ppb		-990SOIL	1-20-20-soil
21201	C	CCB 440-591352/4-A - 2		20 Jan 2020 17:35:28	-0.1938	ppb		-995SOIL	1-20-20-soil
21202	U	440-258909-B-48-B - 1		20 Jan 2020 17:38:12	0.2042	ppb		2823SOIL	1-20-20-soil
21203	U	440-258909-B-48-B - 2		20 Jan 2020 17:38:12	0.2181	ppb		2956SOIL	1-20-20-soil
21204	C	CRA 440-591352/5-A - 1		20 Jan 2020 17:40:22	78.0%	0.1561	ppb	2361SOIL	1-20-20-soil
21205	C	CRA 440-591352/5-A - 2		20 Jan 2020 17:40:22	84.1%	0.1683	ppb	2478SOIL	1-20-20-soil
21206	C	CCV 440-591352/3-A - 1		20 Jan 2020 17:42:37	94.7%	3.7877	ppb	37196SOIL	1-20-20-soil
21207	C	CCV 440-591352/3-A - 2		20 Jan 2020 17:42:37	99.1%	3.9659	ppb	38905SOIL	1-20-20-soil
21208	C	CCB 440-591352/4-A - 1		20 Jan 2020 17:44:48	-0.1768	ppb		-832SOIL	1-20-20-soil
21209	C	CCB 440-591352/4-A - 2		20 Jan 2020 17:44:48	-0.1779	ppb		-842SOIL	1-20-20-soil

## SOIL



Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
IC 440-591352/6-A	0.000	0.067	0.067	1504	32.500	1472	1537			
IC 440-591352/7-A	0.200	0.243	0.043	3192	1.6 %	3140	3244			
IC 440-591352/8-A	0.500	0.499	-0.001	5646	2.0 %	5534	5758			
IC 440-591352/9-A	1.000	0.933	-0.067	9810	2.0 %	9615	10005			
IC 440-591352/10-A	5.000	4.911	-0.089	47971	2.2 %	46926	49016			
IC 440-591352/11-A	10.000	10.048	0.048	97247	2.1 %	95199	99296			

# **GENERAL CHEMISTRY**

COVER PAGE  
GENERAL CHEMISTRY

Lab Name: Eurofins Irvine

Job Number: 440-258875-1

SDG No.: \_\_\_\_\_

Project: ACMS - BP Yerington OU-4b OU-5 Soil

Client Sample ID	Lab Sample ID
WRSB208_0-0.5	440-258875-1
WRSB208_0.5-3	440-258875-2
WRSB208_3-6	440-258875-3
WRSB208_6-15	440-258875-4
WRSB208_15-25	440-258875-5
WRSB208-FD_15-25	440-258875-6
WRSB208_25-35	440-258875-7
WRSB208_35-45	440-258875-8
WRSB208_45-55	440-258875-9
WRSB208_55-65	440-258875-11
WRSB208_65-75	440-258875-12
WRSB208-FD_65-75	440-258875-13
WRSB208_75-85	440-258875-14
WRSB208_85-95	440-258875-15
WRSB208_95-105	440-258875-16
WRSB208_105-115	440-258875-17
WRSB208_115-125	440-258875-19
WRSB208_125-131.5	440-258875-20

Comments:

1B-IN  
INORGANIC ANALYSIS DATA SHEET  
GENERAL CHEMISTRY

Client Sample ID: WRSB208\_0-0.5

Lab Sample ID: 440-258875-1

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG ID.:

Date Sampled: 01/07/2020 11:15

Matrix: Solid

Date Received: 01/10/2020 10:00

Reporting Basis: WET

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Sample Homogenized	yes			NONE			1	Homogenization

1B-IN  
INORGANIC ANALYSIS DATA SHEET  
GENERAL CHEMISTRY

Client Sample ID: WRSB208\_0.5-3

Lab Sample ID: 440-258875-2

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG ID.:

Matrix: Solid

Date Sampled: 01/07/2020 11:25

Reporting Basis: WET

Date Received: 01/10/2020 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Sample Homogenized	yes			NONE			1	Homogenization

1B-IN  
INORGANIC ANALYSIS DATA SHEET  
GENERAL CHEMISTRY

Client Sample ID: WRSB208\_3-6

Lab Sample ID: 440-258875-3

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG ID.:

Date Sampled: 01/07/2020 11:35

Matrix: Solid

Date Received: 01/10/2020 10:00

Reporting Basis: WET

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Sample Homogenized	yes			NONE			1	Homogenization

1B-IN  
INORGANIC ANALYSIS DATA SHEET  
GENERAL CHEMISTRY

Client Sample ID: WRSB208\_6-15

Lab Sample ID: 440-258875-4

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG ID.:

Date Sampled: 01/07/2020 11:42

Matrix: Solid

Date Received: 01/10/2020 10:00

Reporting Basis: WET

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Sample Homogenized	yes			NONE			1	Homogenization

1B-IN  
INORGANIC ANALYSIS DATA SHEET  
GENERAL CHEMISTRY

Client Sample ID: WRSB208\_15-25

Lab Sample ID: 440-258875-5

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG ID.:

Matrix: Solid

Date Sampled: 01/07/2020 11:53

Reporting Basis: WET

Date Received: 01/10/2020 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Sample Homogenized	yes			NONE			1	Homogenization

1B-IN  
INORGANIC ANALYSIS DATA SHEET  
GENERAL CHEMISTRY

Client Sample ID: WRSB208-FD\_15-25

Lab Sample ID: 440-258875-6

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG ID.:

Matrix: Solid

Date Sampled: 01/07/2020 11:58

Reporting Basis: WET

Date Received: 01/10/2020 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Sample Homogenized	yes			NONE			1	Homogenization

1B-IN  
INORGANIC ANALYSIS DATA SHEET  
GENERAL CHEMISTRY

Client Sample ID: WRSB208\_25-35

Lab Sample ID: 440-258875-7

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG ID.:

Matrix: Solid

Date Sampled: 01/07/2020 12:10

Reporting Basis: WET

Date Received: 01/10/2020 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Sample Homogenized	yes			NONE			1	Homogenization

1B-IN  
INORGANIC ANALYSIS DATA SHEET  
GENERAL CHEMISTRY

Client Sample ID: WRSB208\_35-45

Lab Sample ID: 440-258875-8

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG ID.:

Matrix: Solid

Date Sampled: 01/07/2020 12:21

Reporting Basis: WET

Date Received: 01/10/2020 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Sample Homogenized	yes			NONE			1	Homogenization

1B-IN  
INORGANIC ANALYSIS DATA SHEET  
GENERAL CHEMISTRY

Client Sample ID: WRSB208\_45-55

Lab Sample ID: 440-258875-9

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG ID.:

Date Sampled: 01/07/2020 14:16

Matrix: Solid

Date Received: 01/10/2020 10:00

Reporting Basis: WET

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Sample Homogenized	yes			NONE			1	Homogenization

1B-IN  
INORGANIC ANALYSIS DATA SHEET  
GENERAL CHEMISTRY

Client Sample ID: WRSB208\_55-65

Lab Sample ID: 440-258875-11

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG ID.:

Date Sampled: 01/07/2020 14:33

Matrix: Solid

Date Received: 01/10/2020 10:00

Reporting Basis: WET

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Sample Homogenized	yes			NONE			1	Homogenization

1B-IN  
INORGANIC ANALYSIS DATA SHEET  
GENERAL CHEMISTRY

Client Sample ID: WRSB208\_65-75

Lab Sample ID: 440-258875-12

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG ID.:

Date Sampled: 01/07/2020 14:53

Matrix: Solid

Date Received: 01/10/2020 10:00

Reporting Basis: WET

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Sample Homogenized	yes			NONE			1	Homogenization

1B-IN  
INORGANIC ANALYSIS DATA SHEET  
GENERAL CHEMISTRY

Client Sample ID: WRSB208-FD\_65-75

Lab Sample ID: 440-258875-13

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG ID.:

Matrix: Solid

Date Sampled: 01/07/2020 15:03

Reporting Basis: WET

Date Received: 01/10/2020 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Sample Homogenized	yes			NONE			1	Homogenization

1B-IN  
INORGANIC ANALYSIS DATA SHEET  
GENERAL CHEMISTRY

Client Sample ID: WRSB208\_75-85

Lab Sample ID: 440-258875-14

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG ID.:

Matrix: Solid

Date Sampled: 01/07/2020 15:17

Reporting Basis: WET

Date Received: 01/10/2020 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Sample Homogenized	yes			NONE			1	Homogenization

1B-IN  
INORGANIC ANALYSIS DATA SHEET  
GENERAL CHEMISTRY

Client Sample ID: WRSB208\_85-95

Lab Sample ID: 440-258875-15

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG ID.:

Date Sampled: 01/07/2020 15:50

Matrix: Solid

Date Received: 01/10/2020 10:00

Reporting Basis: WET

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Sample Homogenized	yes			NONE			1	Homogenization

1B-IN  
INORGANIC ANALYSIS DATA SHEET  
GENERAL CHEMISTRY

Client Sample ID: WRSB208\_95-105

Lab Sample ID: 440-258875-16

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG ID.:

Matrix: Solid

Date Sampled: 01/08/2020 12:06

Reporting Basis: WET

Date Received: 01/10/2020 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Sample Homogenized	yes			NONE			1	Homogenization

1B-IN  
INORGANIC ANALYSIS DATA SHEET  
GENERAL CHEMISTRY

Client Sample ID: WRSB208\_105-115

Lab Sample ID: 440-258875-17

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG ID.:

Matrix: Solid

Date Sampled: 01/08/2020 12:23

Reporting Basis: WET

Date Received: 01/10/2020 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Sample Homogenized	yes			NONE			1	Homogenization

1B-IN  
INORGANIC ANALYSIS DATA SHEET  
GENERAL CHEMISTRY

Client Sample ID: WRSB208\_115-125

Lab Sample ID: 440-258875-19

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG ID.:

Matrix: Solid

Date Sampled: 01/08/2020 12:42

Reporting Basis: WET

Date Received: 01/10/2020 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Sample Homogenized	yes			NONE			1	Homogenization

1B-IN  
INORGANIC ANALYSIS DATA SHEET  
GENERAL CHEMISTRY

Client Sample ID: WRSB208\_125-131.5

Lab Sample ID: 440-258875-20

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG ID.:

Matrix: Solid

Date Sampled: 01/08/2020 15:57

Reporting Basis: WET

Date Received: 01/10/2020 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Sample Homogenized	yes			NONE			1	Homogenization

6-IN  
DUPLICATE  
GENERAL CHEMISTRY

Lab Name: Eurofins Irvine Job No.: 440-258875-1

SDG No.: \_\_\_\_\_

Matrix: Solid

Method	Client Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD	RPD Limit	Qual
Batch ID:	590265	Date: 01/13/2020 13:58						
Homogeniza	WRSB208_0-0.5	440-258875-1	Sample Homogenized	yes	NONE			
tion								
Homogeniza	WRSB208_0-0.5	440-258875-1 DU	Sample Homogenized	yes	NONE			
tion								

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

9-IN  
DETECTION LIMITS  
GENERAL CHEMISTRY

Lab Name: Eurofins Irvine

Job Number: 440-258875-1

SDG Number: \_\_\_\_\_

Matrix: Solid

Instrument ID: BAL065

Method: Moisture

RL Date: 10/26/2010 18:28

Analyte	Wavelength/ Mass	RL (%)	
Percent Moisture		0.1	

9-IN  
CALIBRATION BLANK DETECTION LIMITS  
GENERAL CHEMISTRY

Lab Name: Eurofins Irvine

Job Number: 440-258875-1

SDG Number: \_\_\_\_\_

Matrix: Solid

Instrument ID: BAL065

Method: Moisture

XRL Date: 11/16/2010 10:12

Analyte	Wavelength/ Mass	XRL (%)	
Percent Moisture		0.1	

13-IN  
ANALYSIS RUN LOG  
GENERAL CHEMISTRY

Lab Name: Eurofins Irvine Job No.: 440-258875-1

SDG No.: \_\_\_\_\_

Instrument ID: NOEQUIP Analysis Method: Homogenization

Start Date: 01/13/2020 13:58 End Date: 01/13/2020 13:58

Lab Sample Id	D/F	T Y p e	Time	Analytes														
				S	H	D												
440-258875-1		1	T 13:58	X														
440-258875-2		1	T 13:58	X														
440-258875-3		1	T 13:58	X														
440-258875-4		1	T 13:58	X														
440-258875-5		1	T 13:58	X														
440-258875-6		1	T 13:58	X														
440-258875-7		1	T 13:58	X														
440-258875-8		1	T 13:58	X														
440-258875-9		1	T 13:58	X														
440-258875-11		1	T 13:58	X														
440-258875-12		1	T 13:58	X														
440-258875-13		1	T 13:58	X														
440-258875-14		1	T 13:58	X														
440-258875-15		1	T 13:58	X														
440-258875-16		1	T 13:58	X														
440-258875-17		1	T 13:58	X														
440-258875-19		1	T 13:58	X														
440-258875-20		1	T 13:58	X														
440-258875-1 DU		1	T 13:58	X														
ZZZZZZ			13:58															

Prep Types:  
T = Total/NA

13-IN  
ANALYSIS RUN LOG  
GENERAL CHEMISTRY

Lab Name: Eurofins Irvine Job No.: 440-258875-1

SDG No.: \_\_\_\_\_

Instrument ID: BAL065 Analysis Method: Moisture

Start Date: 01/13/2020 14:11 End Date: 01/13/2020 15:05

Lab Sample Id	D/F	T Y p e	Time	Analytes																
				M	O	i	s	t												
440-258875-1		1	T 14:11	X																
440-258875-1 DU		1	T 14:11	X																
440-258875-2		1	T 14:11	X																
440-258875-3		1	T 14:11	X																
440-258875-4		1	T 14:11	X																
440-258875-5		1	T 14:11	X																
440-258875-6		1	T 14:11	X																
440-258875-7		1	T 14:11	X																
440-258875-8		1	T 14:11	X																
440-258875-9		1	T 14:11	X																
440-258875-11		1	T 14:11	X																
440-258875-12		1	T 14:11	X																
440-258875-13		1	T 14:11	X																
440-258875-14		1	T 14:11	X																
440-258875-15		1	T 14:11	X																
440-258875-16		1	T 14:11	X																
440-258875-17		1	T 14:11	X																
440-258875-19		1	T 14:11	X																
440-258875-20		1	T 14:11	X																
ZZZZZZ				14:11																
ZZZZZZ				15:05																

Prep Types:  
T = Total/NA

## GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG No.:

Batch Number: 590269

Batch Start Date: 01/13/20 14:11

Batch Analyst: Le, Ha Thanh T

Batch Method: Moisture

Batch End Date: 01/15/20 13:31

Lab Sample ID	Client Sample ID	Method Chain	Basis	DishWeight	SampleMassWet	SampleMassDry	AnalysisComment		
440-258875-B-1	WRSB208_0-0.5	Moisture	T	2.0266 g	12.1071 g	11.6337 g	11.6338		
440-258875-B-1 DU	WRSB208_0-0.5	Moisture	T	2.0412 g	12.3245 g	11.8271 g	11.8272		
440-258875-B-2	WRSB208_0.5-3	Moisture	T	2.0871 g	12.3922 g	11.9779 g	11.9778		
440-258875-B-3	WRSB208_3-6	Moisture	T	2.0373 g	12.1699 g	11.7443 g	11.7444		
440-258875-B-4	WRSB208_6-15	Moisture	T	2.0700 g	12.4731 g	12.0438 g	12.0439		
440-258875-B-5	WRSB208_15-25	Moisture	T	2.0626 g	12.5323 g	12.0895 g	12.0896		
440-258875-B-6	WRSB208-FD_15-25	Moisture	T	2.0830 g	12.1491 g	11.7424 g	11.7425		
440-258875-B-7	WRSB208_25-35	Moisture	T	2.0388 g	12.4055 g	12.0332 g	12.0333		
440-258875-B-8	WRSB208_35-45	Moisture	T	2.0184 g	12.4206 g	12.1789 g	12.1789		
440-258875-B-9	WRSB208_45-55	Moisture	T	2.0792 g	12.3450 g	11.8451 g	11.8450		
440-258875-B-11	WRSB208_55-65	Moisture	T	2.0575 g	12.2197 g	11.7711 g	11.7710		
440-258875-B-12	WRSB208_65-75	Moisture	T	2.0442 g	12.4262 g	11.9327 g	11.9328		
440-258875-B-13	WRSB208-FD_65-75	Moisture	T	2.0190 g	12.5456 g	12.0252 g	12.0253		
440-258875-B-14	WRSB208_75-85	Moisture	T	2.0476 g	12.4804 g	11.8755 g	11.8756		
440-258875-B-15	WRSB208_85-95	Moisture	T	2.0900 g	12.4503 g	11.8555 g	11.8556		
440-258875-B-16	WRSB208_95-105	Moisture	T	2.0818 g	12.1467 g	11.5529 g	11.5530		
440-258875-B-17	WRSB208_105-115	Moisture	T	2.0776 g	12.3357 g	11.8001 g	11.8002		
440-258875-B-19	WRSB208_115-125	Moisture	T	2.0461 g	12.5755 g	12.1005 g	12.1006		
440-258875-B-20	WRSB208_125-131. 5	Moisture	T	2.0639 g	12.6245 g	12.2441 g	12.2440		

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

## GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Irvine

Job No.: 440-258875-1

SDG No.:

Batch Number: 590269

Batch Start Date: 01/13/20 14:11

Batch Analyst: Le, Ha Thanh T

Batch Method: Moisture

Batch End Date: 01/15/20 13:31

Batch Notes	
Balance ID	65
Batch Comment	put the samples back in the oven another 30 mins@ temp 105 c
Date and Time Samples in Desiccator	01/14/2020 08:36
Date and Time Samples out of Desiccator	01/14/2020 09:20
Date samples were placed in the oven	01/13/2020
Oven Temp In	105 Degrees C
Time samples were place in the oven	18:45
Date samples were removed from oven	01/14/2020
Oven Temp Out	105 Degrees C
Time Samples were removed from oven	08:35
Oven ID	6
Thermometer ID	p139, cf 0
Temperature - Start - Uncorrected	105 Degrees C
Temperature - End - Uncorrected	105 Degrees C

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

## Daily Balance Calibration Logbook

Reviewed: \_\_\_\_\_

# **Shipping and Receiving Documents**

**Atlantic Richfield Company**  
A BP affiliated company

**Laboratory Management Program LamP Chain of Custody Record**

BPI/ARC Site Node Path: NV\_YERINGTON

BPI/ARC Facility Name: Anaconda Copper Mine Site

Req Due Date (mm/dd/yy):

STD TAT \_\_\_\_\_ Rush TAT: Yes \_\_\_\_\_ No \_\_\_\_\_

Lab Name: TestAmerica, Inc.		BP/ARC Facility Address: 1 Austin Circle		Consultant/Contractor Wood - E&I Solutions, Inc.		Page 1 of 2	
Lab Address: 17461 Derian Ave, Suite #100 Irvine, CA 92614	City, State, ZIP Code: Yerington, Nevada 89447	Lead Regulatory Agency: NDEP Abandoned Mine Lands Program	Address: 10940 White Rock Rd, Ste 190 Rancho Cordova, CA 95670	Consultant/Contractor Project No: SA18170340.005.055B	Consultant/Contractor PM: Kent Parrish		
Lab PM: Christian Bondoc	California Global ID No.:	Enviro Proposal No: D019Q-0047	Work Release No: WR331232	Phone: 916-636-3200	Email: Kent.Parrish@woodpic.com		
Lab Phone: 949-261-1022	Other Info: OU-4b_OU-5_Soil	Accounting Mode: Provision X OOC-BU _____ OOC-RM _____	Activity: Field Work/Remedial Investigation	Email Report/EDD To: lynda.lombardi@woodpic.com	Invoice To: BP/ARC X Contractor _____		
BP/ARC EBM: Chuck Stilwell		Matrix		No. Containers / Preservative		Requested Analyses	
EBM Phone: 713-998-2443							
EBM Email: Chuck.Stilwell@bp.com							
Lab No.	Sample Description	Date	Time	Water / Liquid	Soil / Solid	HNO <sub>3</sub>	H <sub>2</sub> SO <sub>4</sub>
				Air / Vapor	Unpreserved	Total Number of Containers	MS/MSD
WRSB208_0-0.5	1/7/20	11:15	X			X X	1 Metals are: Al, B, Ca, Fe, K, Li, Mg, Na, P, Sr, Sn, Ti, by 6010B;
WRSB208_0.5-3	1/7/20	11:25	X			X X	As, Ba, Be, Cd, Cr, Co, Cu, Pb, Mn, Mo, Ni, Sb, Se, Ag, Ti, V, Zn by 6020
WRSB208_3-6	1/7/20	11:35	X			X X	
WRSB208_6-15	1/7/20	11:42	X			X X	
WRSB208_15-25	1/7/20	11:53	X			X X	
WRSB208_FD-15-25	1/7/20	11:58	X			X X	
WRSB208_25-35	1/7/20	12:10	X			X X	Report soil on dry weight basis,
WRSB208_35-45	1/7/20	12:21	X			X X	
WRSB208_45-55	1/7/20	14:16	X			X X	
EB10	1/7/20	14:29	X			X X	
Relinquished By / Affiliation							
Sampler's Name: Rachael Klier	Relinquished	Date: 1/20/2020	Time: 12:00	Accepted By / Affiliation: CEC	Date: 1/20/2020	Time: 12:00	
Sampler's Company: WARD							
Shipment Method: Fed Ex	Ship Date: MA 20						
Shipment Tracking No: 7774 1268 5342							
Special Instructions:							
THIS LINE - LAB USE ONLY: Custody Seals In Place (Yes) No				Temp Blank: Yes (No)	Cooler Temp on Receipt: 21/2 F/C	Trip Blank: Yes (No)	MSMSD Sample Submitted: Yes (No)
BP/ARC LamP COC Rev. 7, Jul 29, 2010							



## Login Sample Receipt Checklist

Client: Wood E&I Solutions Inc

Job Number: 440-258875-1

**Login Number: 258875**

**List Source: Eurofins Irvine**

**List Number: 1**

**Creator: Dolidze, Lado**

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

# Internal Chain of Custody Tracking

Login	Smp	Customer Sample ID	Matrix	Container ID	Lab Sample ID	Container Type	Location	Custody User	I/O	ICOC ID	ICOC Date
440-258875	1	WRSB208_0-0.5	Solid	440-6040957	440-258875-A-1	Soil jar 4oz	ICOC23R-E	Le, Ha Thanh T	I	440-151130	01/13/20 16:26
440-258875	1	WRSB208_0-0.5	Solid	440-6040957	440-258875-A-1	Soil jar 4oz	_General Chemistry	Le, Ha Thanh T	I	440-151129	01/13/20 16:24
440-258875	1	WRSB208_0-0.5	Solid	440-6040957	440-258875-A-1	Soil jar 4oz	ICOC23R-E	Dolidze, Lado	I	440-151037	01/10/20 13:52
440-258875	1	WRSB208_0-0.5	Solid	440-6040958	440-258875-B-1	Soil jar 8oz	ICOC23R-E	Mercado, Michael E	I	440-151192	01/15/20 11:55
440-258875	1	WRSB208_0-0.5	Solid	440-6040958	440-258875-B-1	Soil jar 8oz	_Metals Prep	Mercado, Michael E	I	440-151175	01/14/20 13:31
440-258875	1	WRSB208_0-0.5	Solid	440-6040958	440-258875-B-1	Soil jar 8oz	ICOC23R-E	Le, Ha Thanh T	I	440-151130	01/13/20 16:26
440-258875	1	WRSB208_0-0.5	Solid	440-6040958	440-258875-B-1	Soil jar 8oz	ICOC23R-E	Tan, Sarah	I	440-151135	01/13/20 17:00
440-258875	1	WRSB208_0-0.5	Solid	440-6040958	440-258875-B-1	Soil jar 8oz	_Metals Prep	Tan, Sarah	I	440-151134	01/13/20 16:51
440-258875	1	WRSB208_0-0.5	Solid	440-6040958	440-258875-B-1	Soil jar 8oz	_General Chemistry	Le, Ha Thanh T	I	440-151129	01/13/20 16:24
440-258875	1	WRSB208_0-0.5	Solid	440-6040958	440-258875-B-1	Soil jar 8oz	ICOC23R-E	Dolidze, Lado	I	440-151037	01/10/20 13:52
440-258875	2	WRSB208_0.5-3	Solid	440-6040959	440-258875-A-2	Soil jar 4oz	ICOC23R-E	Le, Ha Thanh T	I	440-151130	01/13/20 16:26
440-258875	2	WRSB208_0.5-3	Solid	440-6040959	440-258875-A-2	Soil jar 4oz	_General Chemistry	Le, Ha Thanh T	I	440-151129	01/13/20 16:24
440-258875	2	WRSB208_0.5-3	Solid	440-6040959	440-258875-A-2	Soil jar 4oz	ICOC23R-E	Dolidze, Lado	I	440-151037	01/10/20 13:52
440-258875	2	WRSB208_0.5-3	Solid	440-6040960	440-258875-B-2	Soil jar 8oz	ICOC23R-E	Mercado, Michael E	I	440-151192	01/15/20 11:55
440-258875	2	WRSB208_0.5-3	Solid	440-6040960	440-258875-B-2	Soil jar 8oz	_Metals Prep	Mercado, Michael E	I	440-151175	01/14/20 13:31
440-258875	2	WRSB208_0.5-3	Solid	440-6040960	440-258875-B-2	Soil jar 8oz	ICOC23R-E	Le, Ha Thanh T	I	440-151130	01/13/20 16:26
440-258875	2	WRSB208_0.5-3	Solid	440-6040960	440-258875-B-2	Soil jar 8oz	ICOC23R-E	Tan, Sarah	I	440-151135	01/13/20 17:00
440-258875	2	WRSB208_0.5-3	Solid	440-6040960	440-258875-B-2	Soil jar 8oz	_Metals Prep	Tan, Sarah	I	440-151134	01/13/20 16:51
440-258875	2	WRSB208_0.5-3	Solid	440-6040960	440-258875-B-2	Soil jar 8oz	_General Chemistry	Le, Ha Thanh T	I	440-151129	01/13/20 16:24
440-258875	2	WRSB208_0.5-3	Solid	440-6040960	440-258875-B-2	Soil jar 8oz	ICOC23R-E	Dolidze, Lado	I	440-151037	01/10/20 13:52
440-258875	3	WRSB208_3-6	Solid	440-6040961	440-258875-A-3	Soil jar 4oz	ICOC23R-E	Le, Ha Thanh T	I	440-151130	01/13/20 16:26
440-258875	3	WRSB208_3-6	Solid	440-6040961	440-258875-A-3	Soil jar 4oz	_General Chemistry	Le, Ha Thanh T	I	440-151129	01/13/20 16:24
440-258875	3	WRSB208_3-6	Solid	440-6040962	440-258875-B-3	Soil jar 8oz	ICOC23R-E	Dolidze, Lado	I	440-151037	01/10/20 13:52
440-258875	3	WRSB208_3-6	Solid	440-6040962	440-258875-B-3	Soil jar 8oz	ICOC23R-E	Mercado, Michael E	I	440-151192	01/15/20 11:55
440-258875	3	WRSB208_3-6	Solid	440-6040962	440-258875-B-3	Soil jar 8oz	_Metals Prep	Mercado, Michael E	I	440-151175	01/14/20 13:31
440-258875	3	WRSB208_3-6	Solid	440-6040962	440-258875-B-3	Soil jar 8oz	ICOC23R-E	Le, Ha Thanh T	I	440-151130	01/13/20 16:26
440-258875	3	WRSB208_3-6	Solid	440-6040962	440-258875-B-3	Soil jar 8oz	ICOC23R-E	Tan, Sarah	I	440-151135	01/13/20 17:00
440-258875	3	WRSB208_3-6	Solid	440-6040962	440-258875-B-3	Soil jar 8oz	_Metals Prep	Tan, Sarah	I	440-151134	01/13/20 16:51
440-258875	3	WRSB208_3-6	Solid	440-6040962	440-258875-B-3	Soil jar 8oz	_General Chemistry	Le, Ha Thanh T	I	440-151129	01/13/20 16:24
440-258875	3	WRSB208_3-6	Solid	440-6040962	440-258875-B-3	Soil jar 8oz	ICOC23R-E	Dolidze, Lado	I	440-151037	01/10/20 13:52
440-258875	4	WRSB208_6-15	Solid	440-6040963	440-258875-A-4	Soil jar 4oz	ICOC23R-E	Le, Ha Thanh T	I	440-151130	01/13/20 16:26
440-258875	4	WRSB208_6-15	Solid	440-6040963	440-258875-A-4	Soil jar 4oz	_General Chemistry	Le, Ha Thanh T	I	440-151129	01/13/20 16:24
440-258875	4	WRSB208_6-15	Solid	440-6040963	440-258875-A-4	Soil jar 4oz	ICOC23R-E	Dolidze, Lado	I	440-151037	01/10/20 13:52
440-258875	4	WRSB208_6-15	Solid	440-6040964	440-258875-B-4	Soil jar 8oz	ICOC23R-E	Mercado, Michael E	I	440-151192	01/15/20 11:55
440-258875	4	WRSB208_6-15	Solid	440-6040964	440-258875-B-4	Soil jar 8oz	_Metals Prep	Mercado, Michael E	I	440-151175	01/14/20 13:31
440-258875	4	WRSB208_6-15	Solid	440-6040964	440-258875-B-4	Soil jar 8oz	ICOC23R-E	Le, Ha Thanh T	I	440-151130	01/13/20 16:26
440-258875	4	WRSB208_6-15	Solid	440-6040964	440-258875-B-4	Soil jar 8oz	ICOC23R-E	Tan, Sarah	I	440-151135	01/13/20 17:00
440-258875	4	WRSB208_6-15	Solid	440-6040964	440-258875-B-4	Soil jar 8oz	_Metals Prep	Tan, Sarah	I	440-151134	01/13/20 16:51
440-258875	4	WRSB208_6-15	Solid	440-6040964	440-258875-B-4	Soil jar 8oz	_General Chemistry	Le, Ha Thanh T	I	440-151129	01/13/20 16:24
440-258875	4	WRSB208_6-15	Solid	440-6040964	440-258875-B-4	Soil jar 8oz	ICOC23R-E	Dolidze, Lado	I	440-151037	01/10/20 13:52

# Internal Chain of Custody Tracking

Login	Smp	Customer Sample ID	Matrix	Container ID	Lab Sample ID	Container Type	Location	Custody User	I/O	ICOC ID	ICOC Date
440-258875	5	WRSB208_15-25	Solid	440-6040965	440-258875-A-5	Soil jar 4oz	ICOC23R-E	Le, Ha Thanh T	I	440-151130	01/13/20 16:26
440-258875	5	WRSB208_15-25	Solid	440-6040965	440-258875-A-5	Soil jar 4oz	_General Chemistry	Le, Ha Thanh T	I	440-151129	01/13/20 16:24
440-258875	5	WRSB208_15-25	Solid	440-6040965	440-258875-A-5	Soil jar 4oz	ICOC23R-E	Dolidze, Lado	I	440-151037	01/10/20 13:52
440-258875	5	WRSB208_15-25	Solid	440-6040966	440-258875-B-5	Soil jar 8oz	ICOC23R-E	Mercado, Michael E	I	440-151192	01/15/20 11:55
440-258875	5	WRSB208_15-25	Solid	440-6040966	440-258875-B-5	Soil jar 8oz	_Metals Prep	Mercado, Michael E	I	440-151175	01/14/20 13:31
440-258875	5	WRSB208_15-25	Solid	440-6040966	440-258875-B-5	Soil jar 8oz	ICOC23R-E	Le, Ha Thanh T	I	440-151130	01/13/20 16:26
440-258875	5	WRSB208_15-25	Solid	440-6040966	440-258875-B-5	Soil jar 8oz	ICOC23R-E	Tan, Sarah	I	440-151135	01/13/20 17:00
440-258875	5	WRSB208_15-25	Solid	440-6040966	440-258875-B-5	Soil jar 8oz	_Metals Prep	Tan, Sarah	I	440-151134	01/13/20 16:51
440-258875	5	WRSB208_15-25	Solid	440-6040966	440-258875-B-5	Soil jar 8oz	_General Chemistry	Le, Ha Thanh T	I	440-151129	01/13/20 16:24
440-258875	5	WRSB208_15-25	Solid	440-6040966	440-258875-B-5	Soil jar 8oz	ICOC23R-E	Dolidze, Lado	I	440-151037	01/10/20 13:52
440-258875	6	WRSB208-FD_15-25	Solid	440-6040967	440-258875-A-6	Soil jar 4oz	ICOC23R-E	Le, Ha Thanh T	I	440-151130	01/13/20 16:26
440-258875	6	WRSB208-FD_15-25	Solid	440-6040967	440-258875-A-6	Soil jar 4oz	_General Chemistry	Le, Ha Thanh T	I	440-151129	01/13/20 16:24
440-258875	6	WRSB208-FD_15-25	Solid	440-6040967	440-258875-A-6	Soil jar 4oz	ICOC23R-E	Dolidze, Lado	I	440-151037	01/10/20 13:52
440-258875	6	WRSB208-FD_15-25	Solid	440-6040968	440-258875-B-6	Soil jar 8oz	ICOC23R-E	Mercado, Michael E	I	440-151192	01/15/20 11:55
440-258875	6	WRSB208-FD_15-25	Solid	440-6040968	440-258875-B-6	Soil jar 8oz	_Metals Prep	Mercado, Michael E	I	440-151175	01/14/20 13:31
440-258875	6	WRSB208-FD_15-25	Solid	440-6040968	440-258875-B-6	Soil jar 8oz	ICOC23R-E	Le, Ha Thanh T	I	440-151130	01/13/20 16:26
440-258875	6	WRSB208-FD_15-25	Solid	440-6040968	440-258875-B-6	Soil jar 8oz	ICOC23R-E	Tan, Sarah	I	440-151135	01/13/20 17:00
440-258875	6	WRSB208-FD_15-25	Solid	440-6040968	440-258875-B-6	Soil jar 8oz	_Metals Prep	Tan, Sarah	I	440-151134	01/13/20 16:51
440-258875	6	WRSB208-FD_15-25	Solid	440-6040968	440-258875-B-6	Soil jar 8oz	_General Chemistry	Le, Ha Thanh T	I	440-151129	01/13/20 16:24
440-258875	6	WRSB208-FD_15-25	Solid	440-6040968	440-258875-B-6	Soil jar 8oz	ICOC23R-E	Dolidze, Lado	I	440-151037	01/10/20 13:52
440-258875	7	WRSB208_25-35	Solid	440-6040969	440-258875-A-7	Soil jar 4oz	ICOC23R-E	Le, Ha Thanh T	I	440-151130	01/13/20 16:26
440-258875	7	WRSB208_25-35	Solid	440-6040969	440-258875-A-7	Soil jar 4oz	_General Chemistry	Le, Ha Thanh T	I	440-151129	01/13/20 16:24
440-258875	7	WRSB208_25-35	Solid	440-6040970	440-258875-B-7	Soil jar 8oz	ICOC23R-E	Dolidze, Lado	I	440-151037	01/10/20 13:52
440-258875	7	WRSB208_25-35	Solid	440-6040970	440-258875-B-7	Soil jar 8oz	ICOC23R-E	Mercado, Michael E	I	440-151192	01/15/20 11:55
440-258875	7	WRSB208_25-35	Solid	440-6040970	440-258875-B-7	Soil jar 8oz	_Metals Prep	Mercado, Michael E	I	440-151175	01/14/20 13:31
440-258875	7	WRSB208_25-35	Solid	440-6040970	440-258875-B-7	Soil jar 8oz	ICOC23R-E	Le, Ha Thanh T	I	440-151130	01/13/20 16:26
440-258875	7	WRSB208_25-35	Solid	440-6040970	440-258875-B-7	Soil jar 8oz	ICOC23R-E	Dolidze, Lado	I	440-151129	01/13/20 16:24
440-258875	7	WRSB208_25-35	Solid	440-6040970	440-258875-B-7	Soil jar 8oz	ICOC23R-E	Tan, Sarah	I	440-151135	01/13/20 17:00
440-258875	7	WRSB208_25-35	Solid	440-6040970	440-258875-B-7	Soil jar 8oz	_Metals Prep	Tan, Sarah	I	440-151134	01/13/20 16:51
440-258875	7	WRSB208_25-35	Solid	440-6040970	440-258875-B-7	Soil jar 8oz	_General Chemistry	Le, Ha Thanh T	I	440-151129	01/13/20 16:24
440-258875	7	WRSB208_25-35	Solid	440-6040970	440-258875-B-7	Soil jar 8oz	ICOC23R-E	Dolidze, Lado	I	440-151037	01/10/20 13:52
440-258875	8	WRSB208_35-45	Solid	440-6040971	440-258875-A-8	Soil jar 4oz	ICOC23R-E	Le, Ha Thanh T	I	440-151130	01/13/20 16:26
440-258875	8	WRSB208_35-45	Solid	440-6040971	440-258875-A-8	Soil jar 4oz	_General Chemistry	Le, Ha Thanh T	I	440-151129	01/13/20 16:24
440-258875	8	WRSB208_35-45	Solid	440-6040971	440-258875-A-8	Soil jar 4oz	ICOC23R-E	Dolidze, Lado	I	440-151037	01/10/20 13:52
440-258875	8	WRSB208_35-45	Solid	440-6040972	440-258875-B-8	Soil jar 8oz	ICOC23R-E	Mercado, Michael E	I	440-151192	01/15/20 11:55
440-258875	8	WRSB208_35-45	Solid	440-6040972	440-258875-B-8	Soil jar 8oz	_Metals Prep	Mercado, Michael E	I	440-151175	01/14/20 13:31
440-258875	8	WRSB208_35-45	Solid	440-6040972	440-258875-B-8	Soil jar 8oz	ICOC23R-E	Tan, Sarah	I	440-151135	01/13/20 17:00
440-258875	8	WRSB208_35-45	Solid	440-6040972	440-258875-B-8	Soil jar 8oz	ICOC23R-E	Le, Ha Thanh T	I	440-151130	01/13/20 16:26
440-258875	8	WRSB208_35-45	Solid	440-6040972	440-258875-B-8	Soil jar 8oz	_Metals Prep	Tan, Sarah	I	440-151134	01/13/20 16:51
440-258875	8	WRSB208_35-45	Solid	440-6040972	440-258875-B-8	Soil jar 8oz	_General Chemistry	Le, Ha Thanh T	I	440-151129	01/13/20 16:24
440-258875	8	WRSB208_35-45	Solid	440-6040972	440-258875-B-8	Soil jar 8oz	ICOC23R-E	Dolidze, Lado	I	440-151037	01/10/20 13:52

# Internal Chain of Custody Tracking

Login	Smp	Customer Sample ID	Matrix	Container ID	Lab Sample ID	Container Type	Location	Custody User	I/O	ICOC ID	ICOC Date
440-258875	9	WRSB208_45-55	Solid	440-6040973	440-258875-A-9	Soil jar 4oz	ICOC23R-E	Le, Ha Thanh T	I	440-151130	01/13/20 16:26
440-258875	9	WRSB208_45-55	Solid	440-6040973	440-258875-A-9	Soil jar 4oz	_General Chemistry	Le, Ha Thanh T	I	440-151129	01/13/20 16:24
440-258875	9	WRSB208_45-55	Solid	440-6040973	440-258875-A-9	Soil jar 4oz	ICOC23R-E	Dolidze, Lado	I	440-151037	01/10/20 13:52
440-258875	9	WRSB208_45-55	Solid	440-6040974	440-258875-B-9	Soil jar 8oz	ICOC23R-E	Mercado, Michael E	I	440-151192	01/15/20 11:55
440-258875	9	WRSB208_45-55	Solid	440-6040974	440-258875-B-9	Soil jar 8oz	_Metals Prep	Mercado, Michael E	I	440-151175	01/14/20 13:31
440-258875	9	WRSB208_45-55	Solid	440-6040974	440-258875-B-9	Soil jar 8oz	ICOC23R-E	Tan, Sarah	I	440-151135	01/13/20 17:00
440-258875	9	WRSB208_45-55	Solid	440-6040974	440-258875-B-9	Soil jar 8oz	ICOC23R-E	Le, Ha Thanh T	I	440-151130	01/13/20 16:26
440-258875	9	WRSB208_45-55	Solid	440-6040974	440-258875-B-9	Soil jar 8oz	_Metals Prep	Tan, Sarah	I	440-151134	01/13/20 16:51
440-258875	9	WRSB208_45-55	Solid	440-6040974	440-258875-B-9	Soil jar 8oz	_General Chemistry	Le, Ha Thanh T	I	440-151129	01/13/20 16:24
440-258875	9	WRSB208_45-55	Solid	440-6040974	440-258875-B-9	Soil jar 8oz	ICOC23R-E	Dolidze, Lado	I	440-151037	01/10/20 13:52
440-258875	10	EB10	Water	440-6040975	440-258875-A-10	Plastic 250ml - with Nitric Acid	ICOCWI3-10	Mercado, Michael E	I	440-151403	01/20/20 16:40
440-258875	10	EB10	Water	440-6040975	440-258875-A-10	Plastic 250ml - with Nitric Acid	_Metals Prep	Mercado, Michael E	I	440-151373	01/20/20 12:36
440-258875	10	EB10	Water	440-6040975	440-258875-A-10	Plastic 250ml - with Nitric Acid	ICOCWI3-10	Dolidze, Lado	I	440-151038	01/10/20 13:52
440-258875	11	WRSB208_55-65	Solid	440-6040976	440-258875-A-11	Soil jar 4oz	ICOC23R-E	Le, Ha Thanh T	I	440-151130	01/13/20 16:26
440-258875	11	WRSB208_55-65	Solid	440-6040976	440-258875-A-11	Soil jar 4oz	_General Chemistry	Le, Ha Thanh T	I	440-151129	01/13/20 16:24
440-258875	11	WRSB208_55-65	Solid	440-6040976	440-258875-A-11	Soil jar 4oz	ICOC23R-E	Dolidze, Lado	I	440-151037	01/10/20 13:52
440-258875	11	WRSB208_55-65	Solid	440-6040977	440-258875-B-11	Soil jar 8oz	ICOC23R-E	Mercado, Michael E	I	440-151192	01/15/20 11:55
440-258875	11	WRSB208_55-65	Solid	440-6040977	440-258875-B-11	Soil jar 8oz	_Metals Prep	Mercado, Michael E	I	440-151175	01/14/20 13:31
440-258875	11	WRSB208_55-65	Solid	440-6040977	440-258875-B-11	Soil jar 8oz	ICOC23R-E	Tan, Sarah	I	440-151135	01/13/20 17:00
440-258875	11	WRSB208_55-65	Solid	440-6040977	440-258875-B-11	Soil jar 8oz	ICOC23R-E	Le, Ha Thanh T	I	440-151130	01/13/20 16:26
440-258875	11	WRSB208_55-65	Solid	440-6040977	440-258875-B-11	Soil jar 8oz	_Metals Prep	Tan, Sarah	I	440-151134	01/13/20 16:51
440-258875	11	WRSB208_55-65	Solid	440-6040977	440-258875-B-11	Soil jar 8oz	_General Chemistry	Le, Ha Thanh T	I	440-151129	01/13/20 16:24
440-258875	11	WRSB208_55-65	Solid	440-6040977	440-258875-B-11	Soil jar 8oz	ICOC23R-E	Dolidze, Lado	I	440-151037	01/10/20 13:52
440-258875	12	WRSB208_65-75	Solid	440-6040978	440-258875-A-12	Soil jar 4oz	ICOC23R-E	Le, Ha Thanh T	I	440-151130	01/13/20 16:26
440-258875	12	WRSB208_65-75	Solid	440-6040978	440-258875-A-12	Soil jar 4oz	_General Chemistry	Le, Ha Thanh T	I	440-151129	01/13/20 16:24
440-258875	12	WRSB208_65-75	Solid	440-6040978	440-258875-A-12	Soil jar 4oz	ICOC23R-E	Dolidze, Lado	I	440-151037	01/10/20 13:52
440-258875	12	WRSB208_65-75	Solid	440-6040979	440-258875-B-12	Soil jar 8oz	ICOC23R-E	Mercado, Michael E	I	440-151192	01/15/20 11:55
440-258875	12	WRSB208_65-75	Solid	440-6040979	440-258875-B-12	Soil jar 8oz	_Metals Prep	Mercado, Michael E	I	440-151175	01/14/20 13:31
440-258875	12	WRSB208_65-75	Solid	440-6040979	440-258875-B-12	Soil jar 8oz	ICOC23R-E	Tan, Sarah	I	440-151135	01/13/20 17:00
440-258875	12	WRSB208_65-75	Solid	440-6040979	440-258875-B-12	Soil jar 8oz	ICOC23R-E	Le, Ha Thanh T	I	440-151130	01/13/20 16:26
440-258875	12	WRSB208_65-75	Solid	440-6040979	440-258875-B-12	Soil jar 8oz	_Metals Prep	Tan, Sarah	I	440-151134	01/13/20 16:51
440-258875	12	WRSB208_65-75	Solid	440-6040979	440-258875-B-12	Soil jar 8oz	_General Chemistry	Le, Ha Thanh T	I	440-151129	01/13/20 16:24
440-258875	12	WRSB208_65-75	Solid	440-6040979	440-258875-B-12	Soil jar 8oz	ICOC23R-E	Dolidze, Lado	I	440-151037	01/10/20 13:52
440-258875	13	WRSB208-FD_65-75	Solid	440-6040980	440-258875-A-13	Soil jar 4oz	ICOC23R-E	Le, Ha Thanh T	I	440-151130	01/13/20 16:26
440-258875	13	WRSB208-FD_65-75	Solid	440-6040980	440-258875-A-13	Soil jar 4oz	_General Chemistry	Le, Ha Thanh T	I	440-151129	01/13/20 16:24
440-258875	13	WRSB208-FD_65-75	Solid	440-6040980	440-258875-A-13	Soil jar 4oz	ICOC23R-E	Dolidze, Lado	I	440-151037	01/10/20 13:52
440-258875	13	WRSB208-FD_65-75	Solid	440-6040981	440-258875-B-13	Soil jar 8oz	ICOC23R-E	Mercado, Michael E	I	440-151192	01/15/20 11:55
440-258875	13	WRSB208-FD_65-75	Solid	440-6040981	440-258875-B-13	Soil jar 8oz	_Metals Prep	Mercado, Michael E	I	440-151175	01/14/20 13:31
440-258875	13	WRSB208-FD_65-75	Solid	440-6040981	440-258875-B-13	Soil jar 8oz	ICOC23R-E	Tan, Sarah	I	440-151135	01/13/20 17:00
440-258875	13	WRSB208-FD_65-75	Solid	440-6040981	440-258875-B-13	Soil jar 8oz	ICOC23R-E	Le, Ha Thanh T	I	440-151130	01/13/20 16:26

# Internal Chain of Custody Tracking

Login	Smp	Customer Sample ID	Matrix	Container ID	Lab Sample ID	Container Type	Location	Custody User	I/O	ICOC ID	ICOC Date
440-258875	13	WRSB208_FD_65-75	Solid	440-6040981	440-258875-B-13	Soil jar 8oz	_Metals Prep	Tan, Sarah	I	440-151134	01/13/20 16:51
440-258875	13	WRSB208_FD_65-75	Solid	440-6040981	440-258875-B-13	Soil jar 8oz	_General Chemistry	Le, Ha Thanh T	I	440-151129	01/13/20 16:24
440-258875	13	WRSB208_FD_65-75	Solid	440-6040981	440-258875-B-13	Soil jar 8oz	ICOC23R-E	Dolidze, Lado	I	440-151037	01/10/20 13:52
440-258875	14	WRSB208_75-85	Solid	440-6040982	440-258875-A-14	Soil jar 4oz	ICOC23R-E	Le, Ha Thanh T	I	440-151130	01/13/20 16:26
440-258875	14	WRSB208_75-85	Solid	440-6040982	440-258875-A-14	Soil jar 4oz	_General Chemistry	Le, Ha Thanh T	I	440-151129	01/13/20 16:24
440-258875	14	WRSB208_75-85	Solid	440-6040982	440-258875-A-14	Soil jar 4oz	ICOC23R-E	Dolidze, Lado	I	440-151037	01/10/20 13:52
440-258875	14	WRSB208_75-85	Solid	440-6040983	440-258875-B-14	Soil jar 8oz	ICOC23R-E	Mercado, Michael E	I	440-151192	01/15/20 11:55
440-258875	14	WRSB208_75-85	Solid	440-6040983	440-258875-B-14	Soil jar 8oz	_Metals Prep	Mercado, Michael E	I	440-151175	01/14/20 13:31
440-258875	14	WRSB208_75-85	Solid	440-6040983	440-258875-B-14	Soil jar 8oz	ICOC23R-E	Tan, Sarah	I	440-151135	01/13/20 17:00
440-258875	14	WRSB208_75-85	Solid	440-6040983	440-258875-B-14	Soil jar 8oz	ICOC23R-E	Le, Ha Thanh T	I	440-151130	01/13/20 16:26
440-258875	14	WRSB208_75-85	Solid	440-6040983	440-258875-B-14	Soil jar 8oz	_Metals Prep	Tan, Sarah	I	440-151134	01/13/20 16:51
440-258875	14	WRSB208_75-85	Solid	440-6040983	440-258875-B-14	Soil jar 8oz	_General Chemistry	Le, Ha Thanh T	I	440-151129	01/13/20 16:24
440-258875	14	WRSB208_75-85	Solid	440-6040983	440-258875-B-14	Soil jar 8oz	ICOC23R-E	Dolidze, Lado	I	440-151037	01/10/20 13:52
440-258875	15	WRSB208_85-95	Solid	440-6040984	440-258875-A-15	Soil jar 4oz	ICOC23R-E	Le, Ha Thanh T	I	440-151130	01/13/20 16:26
440-258875	15	WRSB208_85-95	Solid	440-6040984	440-258875-A-15	Soil jar 4oz	_General Chemistry	Le, Ha Thanh T	I	440-151129	01/13/20 16:24
440-258875	15	WRSB208_85-95	Solid	440-6040984	440-258875-A-15	Soil jar 4oz	ICOC23R-E	Dolidze, Lado	I	440-151037	01/10/20 13:52
440-258875	15	WRSB208_85-95	Solid	440-6040985	440-258875-B-15	Soil jar 8oz	ICOC23R-E	Mercado, Michael E	I	440-151192	01/15/20 11:55
440-258875	15	WRSB208_85-95	Solid	440-6040985	440-258875-B-15	Soil jar 8oz	_Metals Prep	Mercado, Michael E	I	440-151175	01/14/20 13:31
440-258875	15	WRSB208_85-95	Solid	440-6040985	440-258875-B-15	Soil jar 8oz	ICOC23R-E	Tan, Sarah	I	440-151135	01/13/20 17:00
440-258875	15	WRSB208_85-95	Solid	440-6040985	440-258875-B-15	Soil jar 8oz	ICOC23R-E	Le, Ha Thanh T	I	440-151130	01/13/20 16:26
440-258875	15	WRSB208_85-95	Solid	440-6040985	440-258875-B-15	Soil jar 8oz	_Metals Prep	Tan, Sarah	I	440-151134	01/13/20 16:51
440-258875	15	WRSB208_85-95	Solid	440-6040985	440-258875-B-15	Soil jar 8oz	_General Chemistry	Le, Ha Thanh T	I	440-151129	01/13/20 16:24
440-258875	15	WRSB208_85-95	Solid	440-6040985	440-258875-B-15	Soil jar 8oz	ICOC23R-E	Dolidze, Lado	I	440-151037	01/10/20 13:52
440-258875	16	WRSB208_95-105	Solid	440-6040986	440-258875-A-16	Soil jar 4oz	ICOC23R-E	Le, Ha Thanh T	I	440-151130	01/13/20 16:26
440-258875	16	WRSB208_95-105	Solid	440-6040986	440-258875-A-16	Soil jar 4oz	_General Chemistry	Le, Ha Thanh T	I	440-151129	01/13/20 16:24
440-258875	16	WRSB208_95-105	Solid	440-6040986	440-258875-A-16	Soil jar 4oz	ICOC23R-E	Dolidze, Lado	I	440-151037	01/10/20 13:52
440-258875	16	WRSB208_95-105	Solid	440-6040987	440-258875-B-16	Soil jar 8oz	ICOC23R-E	Mercado, Michael E	I	440-151192	01/15/20 11:55
440-258875	16	WRSB208_95-105	Solid	440-6040987	440-258875-B-16	Soil jar 8oz	_Metals Prep	Mercado, Michael E	I	440-151175	01/14/20 13:31
440-258875	16	WRSB208_95-105	Solid	440-6040987	440-258875-B-16	Soil jar 8oz	ICOC23R-E	Tan, Sarah	I	440-151135	01/13/20 17:00
440-258875	16	WRSB208_95-105	Solid	440-6040987	440-258875-B-16	Soil jar 8oz	ICOC23R-E	Le, Ha Thanh T	I	440-151130	01/13/20 16:26
440-258875	16	WRSB208_95-105	Solid	440-6040987	440-258875-B-16	Soil jar 8oz	_Metals Prep	Tan, Sarah	I	440-151134	01/13/20 16:51
440-258875	16	WRSB208_95-105	Solid	440-6040987	440-258875-B-16	Soil jar 8oz	_General Chemistry	Le, Ha Thanh T	I	440-151129	01/13/20 16:24
440-258875	16	WRSB208_95-105	Solid	440-6040987	440-258875-B-16	Soil jar 8oz	ICOC23R-E	Dolidze, Lado	I	440-151037	01/10/20 13:52
440-258875	17	WRSB208_105-115	Solid	440-6040988	440-258875-A-17	Soil jar 4oz	ICOC23R-E	Le, Ha Thanh T	I	440-151130	01/13/20 16:26
440-258875	17	WRSB208_105-115	Solid	440-6040988	440-258875-A-17	Soil jar 4oz	_General Chemistry	Le, Ha Thanh T	I	440-151129	01/13/20 16:24
440-258875	17	WRSB208_105-115	Solid	440-6040988	440-258875-A-17	Soil jar 4oz	ICOC23R-E	Dolidze, Lado	I	440-151037	01/10/20 13:52
440-258875	17	WRSB208_105-115	Solid	440-6040989	440-258875-B-17	Soil jar 8oz	ICOC23R-E	Mercado, Michael E	I	440-151192	01/15/20 11:55
440-258875	17	WRSB208_105-115	Solid	440-6040989	440-258875-B-17	Soil jar 8oz	_Metals Prep	Mercado, Michael E	I	440-151175	01/14/20 13:31
440-258875	17	WRSB208_105-115	Solid	440-6040989	440-258875-B-17	Soil jar 8oz	ICOC23R-E	Tan, Sarah	I	440-151135	01/13/20 17:00
440-258875	17	WRSB208_105-115	Solid	440-6040989	440-258875-B-17	Soil jar 8oz	ICOC23R-E	Le, Ha Thanh T	I	440-151130	01/13/20 16:26

# Internal Chain of Custody Tracking

Login	Smp	Customer Sample ID	Matrix	Container ID	Lab Sample ID	Container Type	Location	Custody User	I/O	ICOC ID	ICOC Date
440-258875	17	WRSB208_105-115	Solid	440-6040989	440-258875-B-17	Soil jar 8oz	_Metals Prep	Tan, Sarah	I	440-151134	01/13/20 16:51
440-258875	17	WRSB208_105-115	Solid	440-6040989	440-258875-B-17	Soil jar 8oz	_General Chemistry	Le, Ha Thanh T	I	440-151129	01/13/20 16:24
440-258875	17	WRSB208_105-115	Solid	440-6040989	440-258875-B-17	Soil jar 8oz	ICOC23R-E	Dolidze, Lado	I	440-151037	01/10/20 13:52
440-258875	18	FB10	Water	440-6040990	440-258875-A-18	Plastic 250ml - with Nitric Acid	ICOCWI3-10	Mercado, Michael E	I	440-151403	01/20/20 16:40
440-258875	18	FB10	Water	440-6040990	440-258875-A-18	Plastic 250ml - with Nitric Acid	_Metals Prep	Mercado, Michael E	I	440-151373	01/20/20 12:36
440-258875	18	FB10	Water	440-6040990	440-258875-A-18	Plastic 250ml - with Nitric Acid	_General Chemistry	Le, Ha Thanh T	I	440-151129	01/13/20 16:24
440-258875	18	FB10	Water	440-6040990	440-258875-A-18	Plastic 250ml - with Nitric Acid	ICOCWI3-10	Dolidze, Lado	I	440-151038	01/10/20 13:52
440-258875	19	WRSB208_115-125	Solid	440-6040991	440-258875-A-19	Soil jar 4oz	ICOC23R-E	Le, Ha Thanh T	I	440-151130	01/13/20 16:26
440-258875	19	WRSB208_115-125	Solid	440-6040991	440-258875-A-19	Soil jar 4oz	_General Chemistry	Le, Ha Thanh T	I	440-151129	01/13/20 16:24
440-258875	19	WRSB208_115-125	Solid	440-6040991	440-258875-A-19	Soil jar 4oz	ICOC23R-E	Dolidze, Lado	I	440-151037	01/10/20 13:52
440-258875	19	WRSB208_115-125	Solid	440-6040992	440-258875-B-19	Soil jar 8oz	ICOC23R-E	Mercado, Michael E	I	440-151192	01/15/20 11:55
440-258875	19	WRSB208_115-125	Solid	440-6040992	440-258875-B-19	Soil jar 8oz	_Metals Prep	Mercado, Michael E	I	440-151175	01/14/20 13:31
440-258875	19	WRSB208_115-125	Solid	440-6040992	440-258875-B-19	Soil jar 8oz	ICOC23R-E	Tan, Sarah	I	440-151135	01/13/20 17:00
440-258875	19	WRSB208_115-125	Solid	440-6040992	440-258875-B-19	Soil jar 8oz	ICOC23R-E	Le, Ha Thanh T	I	440-151130	01/13/20 16:26
440-258875	19	WRSB208_115-125	Solid	440-6040992	440-258875-B-19	Soil jar 8oz	_Metals Prep	Tan, Sarah	I	440-151134	01/13/20 16:51
440-258875	19	WRSB208_115-125	Solid	440-6040992	440-258875-B-19	Soil jar 8oz	_General Chemistry	Le, Ha Thanh T	I	440-151129	01/13/20 16:24
440-258875	19	WRSB208_115-125	Solid	440-6040992	440-258875-B-19	Soil jar 8oz	ICOC23R-E	Dolidze, Lado	I	440-151037	01/10/20 13:52
440-258875	20	WRSB208_125-131.5	Solid	440-6040993	440-258875-A-20	Soil jar 4oz	ICOC23R-E	Le, Ha Thanh T	I	440-151130	01/13/20 16:26
440-258875	20	WRSB208_125-131.5	Solid	440-6040993	440-258875-A-20	Soil jar 4oz	_General Chemistry	Le, Ha Thanh T	I	440-151129	01/13/20 16:24
440-258875	20	WRSB208_125-131.5	Solid	440-6040993	440-258875-A-20	Soil jar 4oz	ICOC23R-E	Dolidze, Lado	I	440-151037	01/10/20 13:52
440-258875	20	WRSB208_125-131.5	Solid	440-6040994	440-258875-B-20	Soil jar 8oz	ICOC23R-E	Mercado, Michael E	I	440-151192	01/15/20 11:55
440-258875	20	WRSB208_125-131.5	Solid	440-6040994	440-258875-B-20	Soil jar 8oz	_Metals Prep	Mercado, Michael E	I	440-151175	01/14/20 13:31
440-258875	20	WRSB208_125-131.5	Solid	440-6040994	440-258875-B-20	Soil jar 8oz	ICOC23R-E	Tan, Sarah	I	440-151135	01/13/20 17:00
440-258875	20	WRSB208_125-131.5	Solid	440-6040994	440-258875-B-20	Soil jar 8oz	ICOC23R-E	Le, Ha Thanh T	I	440-151130	01/13/20 16:26
440-258875	20	WRSB208_125-131.5	Solid	440-6040994	440-258875-B-20	Soil jar 8oz	_Metals Prep	Tan, Sarah	I	440-151134	01/13/20 16:51
440-258875	20	WRSB208_125-131.5	Solid	440-6040994	440-258875-B-20	Soil jar 8oz	_General Chemistry	Le, Ha Thanh T	I	440-151129	01/13/20 16:24
440-258875	20	WRSB208_125-131.5	Solid	440-6040994	440-258875-B-20	Soil jar 8oz	ICOC23R-E	Dolidze, Lado	I	440-151037	01/10/20 13:52